

CLERK'S COPY.

239

653307

Vol. I

Sup. Ct.

TRANSCRIPT OF RECORD

(Pages 1 to 784)

Supreme Court of the United States

OCTOBER TERM, 1944

No. 56

SOUTHERN PACIFIC COMPANY, APPELLANT,

vs.

**STATE OF ARIZONA, EX REL. JOE CONWAY,
ATTORNEY GENERAL OF THE STATE OF
ARIZONA**

**APPEAL FROM THE SUPERIOR COURT OF THE STATE OF ARIZONA,
COUNTY OF PIMA**

FILED APRIL 12, 1944.

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1944

No. 56

SOUTHERN PACIFIC COMPANY, APPELLANT,

vs.

STATE OF ARIZONA, EX REL JOE CONWAY,
ATTORNEY GENERAL OF THE STATE OF
ARIZONA

APPEAL FROM THE SUPERIOR COURT OF THE STATE OF ARIZONA,
COUNTY OF PIMA

VOL. I

INDEX.

	Original	Print
Record from Superior Court of State of Arizona in and for County of Pima	1	1
Complaint	1	1
Order staying other proceedings	6	5
Answer	7	5
Statement of evidence	"A"	33
Caption and appearances	"A"	33
Colloquy between Court and counsel	1	33
Plaintiff's case:		
Frank L. Skinner—		
Direct	25	46
Cross	33	50
K. C. Odegard—		
Direct	36	52
Cross	41	55

JUDD & DETWEILER (INC.), PRINTERS, WASHINGTON, D. C., JULY 20, 1944.

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's case:

B. S. Sines—

Direct..... 43 56

2459 1346

2526 1381

2775 1510

2787 1517

3142 1707

3186 1731

3442 1868

3828 2076

Cross..... 66 69

4100 2219

Redirect..... 4152 2246

4197 2269

Recross..... 4227 2286

C. C. Leriche—

Direct..... 67 69

Cross..... 106 91

144 112

Redirect..... 145 113

Frank E. Russell—

Direct..... 113 95

Leroy V. Porter—

Direct..... 150 116

Cross..... 211 147

Alfred H. Wright—

Direct..... 315 205

Cross..... 264 177

Redirect..... 268 179

J. H. Parmelee—

Direct..... 272 181

Cross..... 453 279

Redirect..... 474 290

W. F. Kirk—

Direct..... 375 237

2521

Cross..... 449 277

C. R. Young—

Direct..... 480 294

Cross..... 549 330

Redirect..... 552 332

555 334

717 422

1062 610

Recross..... 553 333

719 423

907 525

1059 608

1067 612

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's case—Continued

P. G. Otterback—

	Original	Print
Direct.....	557	335

C. L. LaFontaine—

Direct.....	635	377
-------------	-----	-----

Cross.....	692	409
------------	-----	-----

	840	490
--	-----	-----

Redirect.....	705	416
---------------	-----	-----

Recross.....	713	420
--------------	-----	-----

W. M. Burn—

Direct.....	722	425
-------------	-----	-----

	835	487
--	-----	-----

Cross.....	736	433
------------	-----	-----

	836	488
--	-----	-----

Redirect.....	751	441
---------------	-----	-----

	837	488
--	-----	-----

C. G. Gregory—

Direct.....	738	434
-------------	-----	-----

	828	483
--	-----	-----

Cross.....	830	484
------------	-----	-----

H. H. Siddall—

Direct.....	753	442
-------------	-----	-----

	831	485
--	-----	-----

Cross.....	833	486
------------	-----	-----

G. W. Oakley—

Direct.....	766	449
-------------	-----	-----

Cross.....	910	527
------------	-----	-----

F. H. Millard—

Direct.....	780	457
-------------	-----	-----

Cross.....	795	464
------------	-----	-----

Redirect.....	798	466
---------------	-----	-----

Bernard M. Snell—

Direct.....	801	468
-------------	-----	-----

Cross.....	815	476
------------	-----	-----

E. M. Albert—

Direct.....	817	477
-------------	-----	-----

Cross.....	827	482
------------	-----	-----

H. R. Fertig—

Direct.....	852	496
-------------	-----	-----

Cross.....	1068	613
------------	------	-----

Redirect.....	1072	615
---------------	------	-----

F. W. Green—

Direct.....	912	527
-------------	-----	-----

Cross.....	1093	626
------------	------	-----

Redirect.....	1094	626
---------------	------	-----

Recross.....	1152	657
--------------	------	-----

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's case—Continued

	Original	Print
William A. Kremer—		
Direct	954	550
Cross	1264	716
Redirect	1272	720
Recross	1277	723
A. E. Callin—		
Direct	996	574
R. C. Randall—		
Direct	1013	583
Cross	1052	604
Redirect	1056	606
Recross	1103	631
	1101	630
W. R. Triem—		
Direct	1076	617
	1095	627
	1104	632
Cross	1131	646
	1156	659
Russell J. Hammond—		
Direct	1137	648
Cross	1196	680
Redirect	1201	683
George H. Warfel—		
Direct	1204	685
Cross	1355	765
Redirect	1372	773
J. P. Kiley—		
Direct	1280	724
Cross	1480	831
Redirect	1489	835
C. C. Peckenpaugh—		
Direct	1317	744
Cross	1419	798
Redirect	1426	802
E. A. White—		
Direct	1374	774
Cross	1380	778
A. E. L. Gareiss—		
Direct	1381	778
Cross	1391	784
Peter Parke—		
Direct	1392	784

Record from Superior Court of State of Arizona in and for
County of Pima—Continued
Statement of evidence—Continued
Defendant's case—Continued
Peter Parke—Continued

Original Print

VOL. II.

Direct	1431	805
Cross	1459	820
Redirect	1463	822
J. B. Baker—		
Direct	1466	824
	1491	837
Cross	1518	851
Redirect	1525	855
L. J. Masson—		
Direct	1528	856
	1909	1057
	2149	1185
Cross	2200	1264
Redirect	3177	1726
Frank D. Beale—		
Direct	1543	864
	1630	914
Cross	1643	917
Redirect	1650	920
Locke S. Wilbur—		
Direct	1586	887
	1652	921
Cross	1652	921
M. C. Blanchard—		
Direct	1654	923
Cross	1707	950
Redirect	1709	951
Recross	1709	951
G. K. Thomas—		
Direct	1710	952
Cross	1729	961
Redirect	1730	962
J. P. McDonald—		
Direct	1735	965
Cross	1761	979
Loyd E. Cartmill—		
Direct	1767	982
Cross	1806	1003
Redirect	1817	1009
	1819	1010
Recross	1818	1010
	1819	1010
R. H. Weeks—		
Direct	1822	1012
J. J. Mahoney—		
Direct	1837	1020
Cross	1966	1088
Redirect	1989	1100
Recross	1992	1102

INDEX

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's case—Continued

Joseph Henry Dyer—

	Original	Print
Direct.....	1993	1103

W. H. Kirkbride—

Direct.....	2027	1120
-------------	------	------

Cross.....	2136	1178
------------	------	------

	3861	2094
--	------	------

	4034	2184
--	------	------

Redirect.....	4042	2188
---------------	------	------

G. C. Baker—

Direct.....	2332	1281
-------------	------	------

	2669	1455
--	------	------

Cross.....	2392	1312
------------	------	------

	2727	1485
--	------	------

	2894	
--	------	--

Redirect.....	2786	1567
---------------	------	------

	2910	1583
--	------	------

W. P. Herbert—

Direct.....	2395	1313
-------------	------	------

	2830	1540
--	------	------

VOL. III

	2884	1570
--	------	------

	3815	2069
--	------	------

Cross.....	3036	1651
------------	------	------

	3057	1661
--	------	------

	4073	2265
--	------	------

Redirect.....	3062	1664
---------------	------	------

Recross.....	3070	1669
--------------	------	------

L. D. Herrell—

Direct.....	2730	1486
-------------	------	------

Cross.....	4068	2201
------------	------	------

Redirect.....	4071	2204
---------------	------	------

Henry W. Cassady—

Direct.....	2810	1529
-------------	------	------

Cross.....	4089	2213
------------	------	------

Arthur C. Browning—

Direct.....	2863	1557
-------------	------	------

Cross.....	2919	1588
------------	------	------

Redirect.....	2932	1595
---------------	------	------

W. G. Reid—

Direct.....	2933	1596
-------------	------	------

Cross.....	2950	1604
------------	------	------

Redirect.....	2952	1605
---------------	------	------

A. F. Burke—

Direct.....	2954	1606
-------------	------	------

F. P. McDonald—

Direct.....	2963	1612
-------------	------	------

W. W. Judson—

Direct.....	2975	1618
-------------	------	------

Cross.....	3032	1659
------------	------	------

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's case—Continued

H. C. Garverick—

	Original	Print
Direct.....	3009	1636

Walter Bohnstengel—

Direct.....	3072	1669
-------------	------	------

Cross.....	3128	1699
------------	------	------

Redirect.....	3130	1701
---------------	------	------

Leslie F. Barker—

Direct.....	3434	1864
-------------	------	------

E. S. Fewtrell—

Direct.....	3545	1924
-------------	------	------

John J. Sullivan—

Direct.....	3552	1927
-------------	------	------

Cross.....	3883	2105
------------	------	------

Redirect.....	3992	2163
---------------	------	------

	4032	2183
--	------	------

	4185	2263
--	------	------

	4195	2268
--	------	------

Recross.....	4027	2180
--------------	------	------

	4194	2267
--	------	------

E. C. Burns—

Direct.....	3796	2059
-------------	------	------

G. A. Bays—

Direct.....	3808	2065
-------------	------	------

Rebuttal:

Trace H. Cooper—

Direct.....	4232	2288
-------------	------	------

Cross.....	4524	2438
------------	------	------

E. J. Durral—

Direct.....	4337	2341
-------------	------	------

VOL. IV

Cross.....	4386	2367
------------	------	------

Redirect.....	4451	2406
---------------	------	------

Recross.....	4459	2404
--------------	------	------

Andrew W. Kennedy—

Direct.....	4466	2408
-------------	------	------

Cross.....	4501	2426
------------	------	------

Redirect.....	4521	2436
---------------	------	------

Recross.....	4522	2437
--------------	------	------

Charles E. Stevenson—

Direct.....	4550	2451
-------------	------	------

Cross.....	4619	2488
------------	------	------

Redirect.....	4645	2502
---------------	------	------

Recross.....	4647	2503
--------------	------	------

Benjamin T. Cheek—

Direct.....	4573	2462
-------------	------	------

Cross.....	4594	2474
------------	------	------

Redirect.....	4617	2486
---------------	------	------

Recross.....	4619	2488
--------------	------	------

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Rebuttal—Continued

	Original	Print
William H. Hauman—		
Direct.....	4649	2504
Cross.....	4659	2509
Louis A. Fail—		
Direct.....	4663	2511
Cross.....	4850	2609
A. T. Ash—		
Direct.....	4747	2555
Cross.....	4767	2566
Redirect.....	4845	2606
Edward B. Shaw—		
Direct.....	4895	2632
Cross.....	4915	2642
Redirect.....	4936	2654
W. A. Kidd—		
Direct.....	4944	2658
J. S. Hardwicke—		
Direct.....	4951	2662
Cross.....	5300	2742
Cross.....	5046	2713
Cross.....	5300	2742
Surrebuttal:		
John J. Sullivan—		
Direct.....	5091	2737
Cross.....	5154	2772
W. G. Fifield—		
Direct.....	5175	2782
Cross.....	5223	2806
Redirect.....	5228	2809
Recross.....	5230	2810
John H. Menzies—		
Direct.....	5233	2812
Cross.....	5248	2819
Redirect.....	5254	2823
Recross.....	5255	2823
B. S. Sines—		
Direct.....	5257	2824
Reporters' certificate..... (omitted in printing)	5308	
Judge's certificate.....	5309	2850
Defendant's exhibits:		
1—Southern Pacific Company, Pacific Lines, (Map).....	5310	2851
2—Southern Pacific Company, Pacific Line— Chronology of Freight Box Cars Year 1900 to 1940 Showing Design and Capacity Characteristics.....	5311	2852

INDEX

ix

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

	Original	Print
3—Southern Pacific Company, Pacific Lines— Comparison of Freight Cars, All Steel, Steel Underframe and of other construc- tion, Years 1903-1939	5312	2853
4—Southern Pacific Company, Pacific Lines— Chronology of Passenger Coach and Chair Car Years 1900 to 1940 Showing design and improvements	5313	2854
5—Southern Pacific Company, Pacific Lines— Chronology of Freight Locomotives, Paci- fic Lines, Years 1899 to 1940, Showing improved design and tractive effort	5314	2855
6—Southern Pacific Lines, Pacific Lines—Chro- nology of Passenger Locomotives, Pacific Lines, Years 1895-1945, showing improved design and increased tractive effort	5315	2856
7—Southern Pacific Company, Pacific Lines— Locomotives purchased or built in Com- pany shops, years 1922-1940	5316	2857
10—New York Central Railroad Company—Map showing territory covered by typical freight train exhibit	5317	2858
11—New York Central Railroad Company, Freight operating and freight transporta- tion expenses related to traffic Calendar years 1922-1939 inclusive	5318	2859
12—New York Central Railroad Company, Freight service operating averages, Calen- dar years 1922-24-26-28-30-32-34-36-38- 39	5319	2860
13—New York Central Railroad, typical exam- ples of freight trains handled	5320	2861
45—Gross expenditures for additions and better- ments to railroad property, 1922-1939, Class I U.S. RR.	5322	2863
16—Average revenue per ton-mile and per passenger-mile, Class I Railways in United States	5323	2864
17—Number, man-hours, and earnings of employ- ees, 1922-1939, Class I Railways of United States	5324	2865
18—Number, man-hours, and earnings of train and engine service employees, 1922-1939, Class I Railways U. S.	5325	2866
19—Income Account—Railways of Class I in United States, Calendar years 1929-1939	5326	2867

Record from Superior Court of State of Arizona in and for
County of Pima.—Continued
Statement of evidence.—Continued
Defendant's exhibits.—Continued

Original Print

20—Railways of Class I in the U. S., Freight operating and freight transportation expenses, calendar years 1920 to 1939 inclusive	5327	2868
21—Railways of Class I in the U. S.—Passenger operating and passenger transportation expenses, 1922-1939 inclusive	5328	2869
22—Railways of Class I in the U. S.—Freight service operating averages Years 1922-24-26-28-30-32-34-36-38-39	5329	2870
23—Missouri Pacific Railroad Co., Map showing territory covered by typical freight train exhibit	5330	2871
24—Missouri Pacific Railroad Co., Freight operating and freight transportation expenses related to traffic 1922-1939, inclusive	5331	2872
25—Missouri Pacific Railroad Co., Freight service operating averages 1922-24-26-28-30-32-34-36-38-39	5332	2873
26—Missouri Pacific Railroad Co., Typical examples of freight trains handled between certain terminals, April 1-10 inclusive, 1939	5333	2874
27—Illinois Central, Map showing territory covered by typical freight train exhibit	5334	2875
28—Illinois Central System, including Yazoo & Mississippi Valley RR Co., Freight operating and freight transportation expenses related to traffic. Calendar years 1922-1939, inclusive	5335	2876
29—Illinois Central System, including Yazoo & Mississippi Valley RR Co., Freight operating averages, calendar years 1922-24-26-28-30-32-34-36-38-39	5336	2877
30—Illinois Central System—Typical examples of through freight trains handled between certain terminals April 10-19 inclusive, 1939	5337	2878
31—Illinois Central System—Maximum number of cars handled in various main line passenger trains, April 10-19, inclusive, 1939	5338	2879
32—Total number of locomotives and total number of freight train cars, all railways, United States, 1890-1910, Class I Railways, United States, 1911-1939	5339	2881
33—Number of steam locomotives for which tractive power was reported, aggregate tractive power reported, and average tractive power per steam locomotive. All railways, U. S., 1903-1910, Class I Rys. U. S., 1911-1939	5342	2882

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

	Original	Print
34—Average tractive power per steam locomotive, all railways, U. S., 1903-1910, Class I Railways, U. S., 1911-1939.....	5344	2884
35—Average tractive power by types of locomotives, Class I Railways, U. S.....	5345	2885
36—Oil-burning steam locomotives and steam locomotives equipped with mechanical stokers, with superheaters, and with boosters, by types of locomotives, Class I Rys. U. S.....	5347	2885
37—Number of freight-carrying cars for which capacity was reported, aggregate car capacity reported, and average capacity per freight-carrying car, all railways, U. S., 1903-1910, Class I Rys., U. S., 1911-1939	5352	2889
38—Total freight-train cars, steel freight-train cars, steel underframe freight-train cars and other freight-train cars; caboose cars excluded, Class I Rys. U. S.....	5354	2890
39—Freight operating revenues, freight operating expenses, and freight operating ratio, Class I Rys. U. S.....	5357	2892
42—Great Northern Railway Co., map showing territory covered by typical freight train exhibit.....	5359	2893
43—Great Northern Railway Co. freight trains operated on Kalispell Division during ten day period, August 15-24, inclusive, 1939..	5360	2894
44—Great Northern Railway Company, ore trains operated on Mesabi Division, August 15-24, inclusive, 1939.....	5361	2895
45—Great Northern Railway Company, maximum number of cars handled in main line passenger trains Nos. 1 & 2, total for 10 day period, June 1-10, incl. 1939.....	5362	2896
46—Great Northern Railway Company, freight operating and freight transportation expenses related to traffic, calendar years 1922-1939, inclusive.....	5363	2897
47—Great Northern Railway Company, freight service operating averages, calendar years 1922-24-26-28-30-32-34-36-38-39.....	5364	2898
48—Northern Pacific Railway Company, freight operating and freight transportation expenses related to traffic, calendar years 1922-1939, inclusive.....	5365	2899

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

Original Print

49—Northern Pacific Railway Company, freight service operating averages calendar years 1922-24-26-27-30-32-34-36-38-39.....	5366	2900
50—Northern Pacific Railway Company, map showing territory covered by typical freight train exhibit.....	5367	2901
51—Rock Island Lines, freight operating and freight transportation expenses related to traffic calendar years 1922 to 1939, inclusive.....	5368	2902
52—Rock Island Lines, freight service operating averages, calendar years 1922-24-26-28-30-32-34-36-38-39.....	5369	2903
53—Chicago, Rock Island and Pacific Ry. Co., map showing territory covered by typical freight train exhibit.....	5370	2904
54—Freight operating and freight transportation expenses related to traffic calendar years 1922-1939, inclusive.....	5371	2905
55—Erie Railroad Co., map showing territory covered by typical freight train exhibit.....	5372	2906
56—Erie Railroad Co., Freight service operating averages, calendar years 1922, 24, 26, 28, 30, 32, 34, 36, 38, 39.....	5373	2907
57—Erie Railroad Co., Revenue freight carried during the year 1939.....	5374	2908
58—St. Louis, Southwestern Ry. Lines, map showing territory covered by typical freight train exhibit.....	5375	2909
59—St. Louis, Southwestern Ry. Lines, freight operating and freight transportation expenses related to traffic, calendar years 1922-1939, inclusive.....	5376	2910
60—St. Louis, Southwestern Ry. Lines, freight service operating averages calendar years 1922-24-26-28-30-32-34-36-38-39.....	5377	2911
61—St. Louis, Southwestern Ry. Lines, perishable carloads, agricultural carloads and total carloads, 1939.....	5378	2912
62—Chicago & North Western Railway Co., map showing territory covered by typical freight train exhibit.....	5379	2913
63—Chicago & North Western Railway Co., freight operating and freight transportation expenses related to traffic, calendar years 1922-1939, inclusive.....	5380	2914

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

Original Print

- | | | |
|---|------|------|
| 64—Chicago & North Western Ry. Co., freight service operating averages, calendar years 1922-24-26-28-30-32-34-36-38-39..... | 5381 | 2915 |
| 65—Chicago & North Western Ry. Co., revenue freight carried during 1939..... | 5382 | 2916 |

VOL. V

- | | | |
|--|------|------|
| 66—Pennsylvania RR map showing territory covered by typical freight train exhibit..... | 5383 | 2917 |
| 67—Pennsylvania RR, freight operating and freight transportation expenses related to traffic, calendar years 9122-39, Inc..... | 5384 | 2918 |
| 68—Pennsylvania RR, freight service operating averages, calendar years 1922-24-26-28-30-32-34-36-38-39..... | 5385 | 2919 |
| 69—Pennsylvania RR., revenue freight carried during year 1939..... | 5386 | 2920 |
| 70—Northern Pacific RR., revenue freight carried during year 1939..... | 5387 | 2921 |
| 71—Chicago, Rock Island & Pacific Ry., revenue freight carried during year 1939..... | 5388 | 2922 |
| 72—Great Northern Ry. Co., revenue freight carried during year 1939..... | 5389 | 2923 |
| 73—Chicago, Rock Island & Pacific Ry. Co., typical examples of freight trains handled between certain terminals, April 1st to 10th inclusive, 1939..... | 5390 | 2924 |
| 74—St. Louis, Southwestern Ry. Lines, typical examples of freight trains handled between certain terminals, April 12 21, inclusive, 1939..... | 5392 | 2926 |
| 75—Chicago & North Western Ry. Co., typical examples of freight trains operated on Wisconsin-Galena-Iowa Divisions, August 1-10, inclusive, 1939..... | 5393 | 2927 |
| 76—Chicago & North Western Ry. Co., Maximum number of cars handled in various main line passenger trains between Chicago and Omaha during period August 1-10, inclusive, 1940..... | 5394 | 2928 |
| 77—Union Pacific RR. Co., map showing territory covered by typical freight train exhibit..... | 5395 | 2929 |
| 78—Union Pacific RR. Co., freight operating and freight transportation expenses related to traffic, calendar years 1922-1939, inclusive..... | 5396 | 2930 |
| 79—Union Pacific RR. Co., freight service operating averages, calendar years 1922-24-26-28-30-32-34-36-38-39..... | 5397 | 2931 |
| 80—Union Pacific RR. Co., revenue freight carried during the year 1939..... | 5398 | 2932 |

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

	Original	Print
81—Erie RR. Co., typical examples of freight trains handled between certain terminals August 1-10, inclusive, 1939.....	5399	2933
82—Erie RR. Co., maximum number of cars handled in various main line passenger trains August 1-10, inclusive, 1939.....	5400	2934
83—Pennsylvania RR., typical examples of freight trains handled between certain terminals, July 10-19, inclusive, 1939.....	5401	2935
84—Pennsylvania RR., maximum number of cars handled in main line passenger trains July 10-19, inclusive, 1939.....	5402	2936
85—Boston & Maine RR. Co., map showing territory covered by typical freight train exhibit.....	5404	2938
86—Boston & Maine RR., freight operating and freight transportation expenses related to traffic, years 1922-39, incl.....	5405	2939
87—Boston & Maine RR., freight service operating averages, calendar years 1922-24-26-28-30-32-34-36-38-39.....	5406	2940
88—Boston & Maine RR., revenue freight carried during year 1939.....	5407	2941
89—Boston & Maine RR., typical examples of freight trains handled.....	5408	2942
90—Boston & Maine RR., maximum number of cars handled in Portland and Fitchburg Division passenger trains, September 17-26, inclusive, 1939.....	5409	2943
91—Union Pacific Railroad, typical examples of freight trains handled between certain terminals, August 10-19, incl., 1940.....	5410	2944
92—Union Pacific RR. Co., maximum number of cars handled Nov. 1939, Jan., April and July, 1940, in through main line passenger trains.....	5411	2985
93—Chicago, Mil. St. Paul & Pacific, map showing territory covered by typical freight train exhibit.....	5412	2946
94—Chicago, Mil. St. Paul & Pacific, freight operating and freight transportation expenses related to traffic, calendar years 1922-1939, inclusive.....	5413	2917
95—Chicago, Mil. St. Paul & Pacific, freight service operating averages, calendar years 1922-24-26-28-30-32-34-36-38-39.....	5414	2948

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

	Original	Print
96—Chicago, Mil. St. Paul & Pacific, revenue freight carried during year 1939.....	5415	2949
97—Chicago, Mil. St. Paul & Pacific, typical examples of freight trains handled between certain terminals, March 1-10, inclusive, 1939.....	5416	2950
98—Chicago, Mil. St. Paul & Pacific, maximum number of cars handled in selected through main line passenger trains operated between Chicago and Minneapolis during months of Jan., April, July & Oct. 1939.....	5417	2951
99—Chicago, Burlington & Quincy RR., map showing territory covered by typical freight train exhibit.....	5418	2952
100—Chicago, Burlington & Quincy RR., typical examples of through road freight trains run between terminals shown for continuous ten day period in Sept. 1939.....	5419	2953
101—Chicago, Burlington & Quincy RR., maximum number of cars handled in various main line passenger trains—total for 10 day period, September 11-20, 1939.....	5420	2954
102—Chicago, Burlington & Quincy RR., freight operating and freight transportation expenses related to traffic.....	5421	2955
103—Chicago, Burlington & Quincy RR., freight service operating averages, calendar years 1922-24, 26-28-30-32-34-36-38-39.....	5422	2956
104—Chicago, Burlington & Quincy RR., number of cars of revenue freight carried during the year 1939.....	5423	2957
105—Illinois Central RR. Co., Number of carloads of revenue freight carried of certain selected commodities, total products of agriculture and total car-load traffic as shown on Schedule 541 of the Annual Report to the I. C. C.....	5424	2958
106—Yazoo & Mississippi Valley RR. Co., (Same as No. 105).....	5425	2959
107—Pullman Company, Chronology of advances in sleeping car construction, 1900-1940.....	5426	2960
108—Pullman Company, Number of Pullman cars "on hand," December 31, years 1900-1939.....	5427	2961
109—Pullman Company, Classification of cars owned as of December 31, 1900-1939, as wood, steel or lightweight.....	5428	2963

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

Original Print

- | | | |
|---|------|------|
| 110—Southern Pacific Co., Statement showing by accounts appraised market value of land and reproduction cost new of other facilities as shown in ICC 19-A Valuation report, as of valuation dates adjusted for additions, betterments and retirements, as shown in carriers reports to I. C. C. under valuation order 3 | 5429 | 2964 |
| 111—Southern Pacific Co., (Same as No. 110—broken down—Yuma, Arizona to El Paso, Texas, via Gila and Lordsburg; Tucson, Arizona to El Paso, Texas, via Douglas; Wellton, Arizona to Picacho, Arizona, via Phoenix) Summary | 5430 | 2965 |
| 112—Southern Pacific Co., (Same as No. 110—broken down—Wellton, Arizona to Picacho, Arizona, via Phoenix) Arizona | 5431 | 2966 |
| 113—Southern Pacific Co., (Same as No. 110—broken down—Yuma, Arizona, to El Paso, Tex., via Gila and Lordsburg) Arizona-New Mexico-Texas | 5432 | 2967 |
| 114—Southern Pacific Company, (Same as No. 110—broken down—Tucson, Arizona to El Paso, Texas, via Douglas) Arizona-New Mexico-Texas | 5436 | 2971 |
| 115—Southern Pacific Co., Pacific Lines, operated steam mileage by divisions and States as of Dec. 31, 1939 | 5440 | 2975 |
| 116—Chesapeake & Ohio Ry. Co., map showing territory covered by typical freight train exhibit | 5441 | 2976 |
| 117—Chesapeake & Ohio Ry. Co., freight trains operated between the regular freight engine terminals on sub-divisions listed, separated to show the number of trains handling a maximum number of cars (including caboose) as indicated by the groupings | 5442 | 2977 |
| 118—Photograph 160 car coal train on Chesapeake and Ohio | 5443 | 2978 |
| 119—Chesapeake & Ohio Ry. Co., maximum number of cars handled in various main line passenger trains, total for months of January, April, July and Oct. 1939 | 5444 | 2979 |
| 120—Chesapeake & Ohio Ry. Co., freight operating and freight transportation expenses related to traffic, calendar years 1922 to 1939, inclusive | 5445 | 2980 |
| 121—Chesapeake & Ohio Ry. Co., freight service operating averages, calendar years 1922-24-26-28-30-32-34-36-38-39 | 5446 | 2981 |

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

	Original	Print
122—Chesapeake & Ohio Ry. Co., Casualties to all classes of employees on duty and to trainmen and enginemen on duty sustained in train and train service accidents.....	5447	2982
123—Chesapeake & Ohio Ry. Co., derailments all classes of service reportable to the I. C. C. for years 1924-1938; incl.	5448	2983
124—Atchison, Topeka & Santa Fe System, map showing territory covered by typical freight train exhibit.....	5449	2984
125—Atchison, Topeka & Santa Fe System, main track operated mileage.....	5450	2985
126—Main line of the A. T. & S. F. Ry. Co., between Los Angeles, Calif., and Clovis, New Mexico, between Clovis and Chicago, Illinois, and between Dalies, New Mexico and Ellinor, Kansas.....	5451	2986
127—A. T. & S. F. System, dates of construction of second track across state of Arizona.....	5454	2989
128—A. T. & S. F., weight of rail in main track operated mileage, Los Angeles to Chicago.....	5455	2990
129—A. T. & S. F., class of ballast in main track operated mileage, Los Angeles to Chicago.....	5456	2991
130—A. T. & S. F., freight operating and freight transportation expenses related to traffic, calendar years 1922 to 1939, inclusive.....	5457	2992
131—A. T. & S. F., freight service operating averages, calendar years 1922-24-26-28-30-32-34-36-38-39.....	5458	2993
132—A. T. & S. F., Revenue freight carried during the year 1939.....	5459	2994
133—A. T. & S. F., Revenue freight carried during the year 1939, Arizona.....	5463	2998
134—A. T. & S. F., Revenue freight carried during the year 1939, New Mexico.....	5465	3000
135—Chronology of Pacific Fruit Express freight refrigerator cars, years 1906-1936, showing design and capacity characteristics.....	5467	3002
136—Pacific Fruit Express Co., details of construction of P. F. E. cars, etc.....	5468	3003
137—General instructions for inspecting cars.....	5471	3006
138—A. T. & S. F., typical examples of freight trains handled on main line between Chicago and Gallup, Needles, Arizona and Bakersfield, Calif., and Barstow and San Bernardino, Calif., Feb. 1, to 10, 1940.....	5472	3007
139—A. T. & S. F., maximum number of cars handled in various main line passenger trains between Chicago and Los Angeles, February 2-8 inclusive, 1940.....	5475	3010

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

Original Print

VOL. VI.

140—A. T. & S. F., freight train miles and freight car miles, main line territory between, Clovis and Gallup, N. M. and Gallup, N. M., and Needles, Calif., years 1923 to 1939, inclusive	5481	3016
141—Southern Pacific Co., Pacific Lines, freight revenues within the State of Arizona, years 1912 to 1939, inclusive	5482	3017
142—Southern Pacific Co., Pacific Lines, freight revenues as allocated to the State of Arizona in accordance with formulae pre- scribed by Arizona Corporation Commis- sion, Sept. 23, 1914, segregated between specified classes of traffic, calendar years 1930-1939 incl.	5483	3018
143—Southern Pacific Co., Pacific Lines, revenue ton miles of freight carried in the State of Arizona, calendar years 1925-1939, inclu- sive	5484	3019
144—Southern Pacific Co., Pacific Lines, analysis of interstate and intrastate revenue freight tons carried one mile in the State of Ari- zona, calendar years 1925-29-38-39	5485	3020
145—Southern Pacific Co., Pacific Lines, tons of revenue freight carried one mile through, and/or, to and from points within, State of Arizona, segregated between traffic to and from Mexico and traffic to and from all other points beyond the State, calendar year 1939	5486	3021
146—S. P. Co., Pacific Lines, passenger revenues within State of Arizona, years 1912 to 1939 inclusive	5487	3022
147—Southern Pacific Co., Pacific Lines, revenue passengers carried one mile in the State of Arizona	5488	3023
148—Southern Pacific Co., Pacific Lines, analysis of interstate and intrastate revenue pas- sengers carried one mile in the State of Arizona, calendar years 1925-29-38-39	5489	3024
149—Southern Pacific Co., Pacific Lines, statistics of rail-line operations within the State of Arizona, main line and branches, excluding mixed service, years 1910-1939 inclusive; freight trains	5490	3025

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

	Original	Print
150—Southern Pacific Co., Pacific Lines, statistics of rail-line operations within the State of Nevada (main line and branches, excluding mixed service) Years 1910 to 1939, inclusive; freight trains.....	5491	3026
151—Southern Pacific Co., Pacific Lines, freight operating and freight transportation expenses related to traffic, calendar years 1922-1939, inclusive.....	5492	3027
154—Southern Pacific Co., Pacific Lines, operating divisions (map).....	5493	3028
155—Southern Pacific Co., condensed profiles, El Paso route.....	5494	3029
156—Southern Pacific Co., condensed profiles, Ogden Route.....	5495	3030
157—Southern Pacific Co., development of rail sections.....	5496	3031
158—Southern Pacific Company, development of roadbed.....	5497	3032
159—Southern Pacific Company, development of tie plates.....	5498	3033
160—Southern Pacific Company, Pacific Lines, freight operating and freight transportation expenses related to traffic, State of Arizona, calendar years 1922-1939, inclusive.....	5499	3034
161—Southern Pacific Co., Pacific Lines, freight operating and freight transportation expenses related to traffic, State of Nevada, calendar years 1922-1939, inclusive.....	5500	3035
162—Southern Pacific Co., Pacific Lines, freight service operating averages, calendar years 1922-24-26-28-30-32-34-36-38-39.....	5501	3036
163—Southern Pacific Co., Pacific Lines, freight service operating averages, Tucson Division, calendar years 1930-32-34-36-38-39.....	5502	3037
164—Southern Pacific Co., Pacific Lines, freight service operating averages, Salt Lake Division, calendar years, 1930-32-34-36-38-39.....	5503	3038
165—Southern Pacific Co., Pacific Lines, average freight revenue per train mile, car mile, and 1,000 revenue ton miles, Pacific Lines compared with States of Nevada and Arizona, respectively, calendar years 1922-1939, incl.....	5504	3039
166—Southern Pacific Co., Pacific Lines, revenue freight carried by Pacific Lines, year 1939.....	5505	3040
167—Southern Pacific Co., Pacific Lines, revenue freight carried within the State of Arizona, year 1939.....	5506	3041

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

	Original	Print
168—Southern Pacific Co., Pacific Lines, revenue freight carried within the State of New Mexico, year 1939.....	5507	3042
169—Southern Pacific Co., Pacific Lines, revenue freight carried within the State of Nevada, year 1939.....	5508	3043
170—Southern Pacific Co., Pacific Lines, segregation of freight car miles in States of Nevada and Arizona and for Pacific Lines as a whole, year 1939.....	5509	3044
171—Southern Pacific Co., Pacific Lines, Lines and operations abandoned under authority of I. C. C. (exclusive of electric lines in California and Oregon), period January 1, 1930 to December 31, 1939, inclusive.....	5510	3045
172—Southern Pacific Co., Pacific Lines, Net rail way operating income and rate of return on investment (Book Value), calendar years 1925 to 1939, inclusive.....	5512	3047
173—Southern Pacific Transportation System Income account for the calendar years 1925-1939, inclusive.....	5528	3063
174—S. P. Co., summary of authorizations granted by I. C. C. under Section 20a of Interstate Commerce Act, to assume obligation and liability in respect of various issues of equipment trust certificates.....	5529	3064
176—S. P. Co., Pacific Lines, eastward perishable and westward manifest schedules.....	5530	3065
177—S. P. Co., Pacific Lines, average cars per freight train versus cost per 1000 gross ton miles, main and branch line—Form 521 freight statistics, Tucson and Salt Lake Divisions for the years 1937-38-39.....	5531	3066
178—S. P. Co., Pacific Lines, main and branch lines, freight train comparisons, Tucson and Salt Lake Divisions and Pacific Lines, cars per train, gross ton miles per train mile, cost per 1000 gross ton miles.....	5532	3067
179—S. P. Co., Pacific Lines, comparisons between Tucson Division, Pacific Lines, and Salt Lake Division showing trends in freight train lengths and freight train loading, and effect on operating costs.....	5533	3068
180—S. P. Co., Pacific Lines, statistics of main line operations, Tucson Division, compared with Salt Lake Division and Pacific Lines, years 1920-1939, incl.....	5537	3072

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

Original Print

181—S. P. Co., Pacific Lines, comparison between short train operation on Tucson Division and long train operation on Salt Lake Division, showing excess train miles caused on Tucson Division by short train operation, main line.....	5538	3073
182—S. P. Co., Pacific Lines, Yuma, Arizona to Lordsburg, New Mexico, Length of freight and passenger trains operated during the six months period, January to June, 1912.....	5539	3074
183—S. P. Co., Pacific Lines, Tucson Division, Yuma, Arizona to El Paso, Texas, locomotives in service, January to June, 1912.....	5540	3075
184—Full Crew Laws, Nevada and Arizona.....	5541	3076
185—S. P. Co., Pacific Lines, summary of freight train operations of trains of 70 cars and less and 71 cars and over in specified districts, States of Oregon, California, Utah, New Mexico and Texas, excluding lines in Arizona for months of January, April, July and October, 1939.....	5542	3077
186—Southern Pacific Co., Pacific Lines, summary of freight train operations by various lengths between Sparks, Nevada and Ogden, Utah, total of months, Jan., April, July and October, year 1939.....	5543	3078
187—S. P. Co., Pacific Lines, maximum number of cars handled in various main line passenger trains, January, April, July and October, 1939.....	5544	3079
188—S. P. Co., Pacific Lines, Number of passenger trains, of different lengths between Los Angeles, California and El Paso Texas, year, 1939.....	5546	3081
189—S. P. Co., Pacific Lines, Cars received and forwarded at El Paso, Texas, years 1930-1939, inclusive and at Ogden, Utah, year 1939.....	5547	3082
190—S. P. Co., Pacific Lines, Loaded and empty PFE and other car miles, States of Arizona and Nevada, main and branch, freight and mixed.....	5548	3083
191—S. P. Co., Pacific Lines, Average number of freight trains per day per mile of road for selected months of years 1928 to 1939, inclusive.....	5549	3084
192—AT&SFRY. and GC&SFRY, consist of passenger trains as of June 2, 1940.....	5550	3085

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

	Original	Print
193—S. P. Co., Pacific Lines, Gross ton miles per train hour and net tons per train, Salt Lake Division, Tucson Division and Pacific Lines	5574	3105
194—S. P. Co., Pacific Lines, classes and number of employees, Tucson Division, Years 1934-1938-1939	5575	3106
195—S. P. Co., Pacific Lines, I. C. C. orders concerning the matter of Method and Form of Records to be kept by carriers relating to the time on duty of employees and the movement of trains	5576	3107
196—S. P. Co., Pacific Lines, Redispatch and other studies made to determine effect of Arizona Train Limit Law on freight and passenger operations	5582	3113
197—S. P. Co., present and proposed siding capacities expressed in number of cars	5583	3114
198—S. P. Co., Pacific Lines, sample copy of Work Sheet A (page 167 of 1938 redispatch study)	5584	3115
199—S. P. Co., Pacific Lines, Los Angeles, Calif. to El Paso, Tex., analysis of passenger operations for year 1938, showing unnecessary interference, switching delay, adverse routing, reassignment of passenger car space, splitting and consolidation of trains, cancellation of assigned car movements, excess passenger car miles and additional helper service caused by observance of Arizona 14 car limit law, year 1938	5585	3116
200—S. P. Co., Pacific Lines, Grade crossings within the State of Arizona as reported to Corporation Commission of State of Arizona, year ended December 31, 1939, by S. P. Co., and number at end of years 1930 to 1938, inclusive	5618	3149
201—S. P. Co., Pacific Lines, Grade crossings (same as 200 except reported to Nevada Public Service Commission for State of Nevada)	5619	3150
202—S. P. Co., Pacific Lines, Yuma, Arizona to El Paso, Texas, increased investment in siding extensions incident to long train operation	5620	3151
204—Chronological History of certain rules relating to air brakes, axles, brake beams and hangers, couplers, draft gears, etc., as appearing in Rule Books of Amer. Assoc. of Railroads	5621	3153

Record from Superior Court of State of Arizona in and for
County of Pima—Continued.

Statement of evidence—Continued.

Defendant's exhibits—Continued

Original Print

- 205—S. P. Co., Pacific Lines, Yuma, Arizona to El Paso, Texas, increased investment in water, roundhouse and shop facilities incident to adoption of long train program.... 5667 3190
- 207—Northern Pacific Ry. Co., Typical examples of freight trains handled between certain terminals, October 1-10, inclusive, 1939.... 5668 3191
- 208—Northern Pacific Ry. Co., Maximum number of cars handled in various main line passenger trains, October 1-10, 1939, inclusive. 5669 3192
- 209—S. P. Co., Pacific Lines, Basic rates of pay for standard days and certain runs on the Tucson and Rio Grande Divisions..... 5670 3193
- 210—S. P. Co., Pacific Lines, Comparative position of coupler under maximum draft gear travel, normal buff and pull, (representing National M-17, M-17-A, and M-17A (certified) draft gears)..... 5671 3194
- 211—S. P. Co., Pacific Lines, Number of passenger trains of different lengths between El Paso, Texas and Tucumanari, New Mexico, Year 1939..... 5672 319
- 212—S. P. Co., Pacific Lines, Tucson and Salt Lake Divisions, locomotive assignment as of November 30, 1940..... 5673 3196
- 213—S. P. Co., Pacific Lines, lengths and capacities of main line sidings in Arizona, Yuma, Arizona State Line to Arizona-N. M. State Line, via Gila and Bowie, year 1912..... 5674 3197
- 214—Main line freight trains of various lengths operated between Yuma, Ariz., and El Paso, Texas, via Gila, Arizona, and Lordsburg, New Mexico and via Douglas Arizona, over south line during June and August, 1938, as all operations compared with redispached..... 5675 3 98

VOL. VII

- 215—S. P. Co., relative train lengths, Calif.-Arizona-New Mexico-Texas, through and local freight trains operating via Yuma, Gila, Tucson, Lordsburg and El Paso, excluding Strauss turnaround trains, based on redispaching study of June and August, 1938, with no 70 car restriction and using AC power and long sidings..... 5676 3199
- 216—S. P. Co., Pacific Lines, revenue freight carried during the year 1939..... 5677 3200

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

	Original	Print
217—S. P. Co., Pacific Lines, State of Arizona, revenue freight carried during the year 1939.....	5681	3204
218—S. P. Co., Pacific Lines, State of New Mexico, revenue freight carried during the year 1939.....	5683	3206
219—S. P. Co., Pacific Lines, State of Nevada, revenue freight carried during yr. 1939....	5685	3208
220—S. P. Co., Yuma, Arizona to El Paso, Texas, June 18, 1938, train movements, actual and redispached.....	5687	3210
222—S. P. Co., Pacific Lines, Yuma, Arizona, El Paso, Texas via Gila and Lordsburg, locomotive requirements for long train operation June 16-20, 1938.....	5688	3211
223—S. P. Co., Pacific Lines, locomotive assignment, weight and investment, Yuma, Arizona to El Paso, Texas (including the Douglas Line and excluding the Phoenix Line) June, 1938.....	5689	3212
224—S. P. Co., Pacific Lines, Tucson and Rio Grande Divisions, through freight-pool service. Additional cabooses and caboose investment required by Arizona Train Limit Law.....	5690	3213
225—S. P. Co., Pacific Lines, Yuma, Arizona, El Paso, Texas, Summary of investment charges and annual charges incident to adoption of long train operation.....	5691	3214
226—S. P. Co., Pacific Lines, redispach study operating statistics Yuma, Arizona to El Paso, Texas, excluding Phoenix Line, period June and August, 1938.....	5692	3215
227—S. P. Co., Pacific Lines, arrival time at El Paso, Texas, of fruit blocks and manifest sections, actual operation compared with redispached operation, with no restriction and using AC power and long sidings, months of June and August, 1938.....	5694	3217
228—S. P. Co., Pacific Lines, arrival time at Yuma, Arizona of "SSW" and "GBW" westward manifest trains, actual operation compared with redispached operation, with no restriction and using AC power and long sidings, months of June and August, 1938.....	5700	3223
229—S. P. Co., Pacific Lines, redispach study wage data, Yuma, Arizona to El Paso, Texas, for period June and Aug. 1938.....	5704	3227

Record from Superior Court of State of Arizona in and for
County of Pima—ContinuedStatement of evidence—Continued
Defendant's case—Continued

	Original	Print
230—S. P. Co., Pacific Lines, Los Angeles, Calif. to El Paso, Texas, passenger redispach study for year 1938. Statistics of operation of second and extra sections of passenger trains caused by observance of Arizona 14 car law	5705	3228
231—S. P. Co., Pacific Lines, Los Angeles, Calif., to El Paso, Tex., saving in passenger train service and costs account discontinuance of 14 car limit of passenger trains in Arizona, year 1938	5706	3229
232—S. P. Co., Pacific Lines, passenger redispach study, year 1938, Los Angeles, California to El Paso, Tex., extra-territorial effect of Arizona Train Limit Law between Los Angeles, California and Yuma, Arizona, and Arizona New Mexico State Line and El Paso, Texas	5707	3230
233—S. P. Co., Pacific Lines, redispach study—operating statistics Tucson-Phoenix, month of December 1938	5708	3230A
234—S. P. Co., Pacific Lines, main line ft. trains of various lengths operated between Yuma, Arizona and El Paso, Texas via Gila, Ariz., and Lordsburg, N. M., and via Douglas, Arizona, over south line during period April 4-30, 1940, incl., actual operation compared with redispached operation, observing 70 car restriction and using present power and short sidings	5709	3231
235—S. P. Co., Relative train lengths, Calif. Ariz., New Mexico-Texas. Through and local freight trains operating via Yuma, Gila, Tucson, Lordsburg and El Paso based on redispaching study of April, 1940, observing 70 car restriction and using present power and short sidings	5710	3232
236—S. P. Co., Pacific Lines, redispach study—operating statistics, Yuma, Arizona to El Paso, Tex., for period April 4-30, 1940, actual operation compared with redispached operation observing 70 car restriction and using present power and short sidings	5711	3233
237—S. P. Co., Pacific Lines, arrival time at El Paso, Texas, of fruit blocks and manifest sections, actual operation compared with redispached operation, observing 70 car restriction and using present power and short sidings, April 4 to May 1, inclusive, 1940	5713	3235

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

Original Print

- | | | |
|--|------|------|
| 238—S. P. Co., Pacific Lines, arrival time at Yuma, Arizona of "SSW" and "GBW" westward manifest trains; actual operation compared with redispached operation, observing 70 car restriction and using present power and short sidings..... | 5718 | 3240 |
| 239—S. P. Co., Pacific Lines, redispach study wage data, Yuma, Arizona to El Paso, Texas, for period April 4-30, 1940, actual operation compared with redispached operation observing 70 car restriction and using present power and short sidings..... | 5721 | 3243 |
| 240—S. P. Co., Pacific Lines, main line frt. trains of various lengths operated bet. Yuma, Ariz. and El Paso, Tex. via Gila, Ariz., and Lordsburg, N. M., and via Douglas, Ariz. over South Line, during Apr. 4-30, 1940, incl., actual operation compared with redispached, with no restrictions and using AC power and long sidings..... | 5722 | 3244 |
| 241—S. P. Co., Pacific Lines, relative train lengths, Calif.-Ariz.-New Mexico-Texas. Through and local freight trains operating via Yuma, Gila, Tucson, Lordsburg and El Paso; based on redispaching study of April, 1940, with no 70 car restriction and using AC power and long Sidings..... | 5723 | 3245 |
| 242—S. P. Co., Pacific Lines, redispach study operating statistics, Yuma, Arizona to El Paso, Texas for period April 4-30, 1940, actual operation compared with redispached operation, with no restriction and using AC power and long sidings..... | 5724 | 3246 |
| 243—S. P. Co., Pacific Lines, arrival time at El Paso, Texas of fruit blocks and manifest sections, April 4th to May 1st, inclusive, 1940, Redispached AC power..... | 5726 | 3248 |
| 244—S. P. Co., Pacific Lines, arrival time at Yuma, Arizona of "SSW" and "GBW" westward manifest trains, actual operation compared with redispached operation, with no restriction and using AC power and long sidings, month of April, 1940..... | 5730 | 3252 |
| 245—S. P. Co., Pacific Lines, redispach study wage data, Yuma, Ariz., to El Paso, Tex., for period April 4-30, 1940, actual operation compared with redispached operation with no restriction and using AC power and long sidings..... | 5732 | 3254 |

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

	Original	Print
246—S. P. Co., Pacific Lines, State of Arizona statistics in connection with passenger trains exceeding 14 cars in length operated during March and April, 1940.....	5733	3255
247—Southern Pacific Co., Pacific Lines, freight cars equipped with friction draft gear January 1, 1941.....	5734	3256
248—Total road mileage as of Dec. 31, 1939 and freight train car miles and revenue passenger miles operated during the year 1939, Class I railroads of U. S. and of certain railroads concerning which individual witnesses have heretofore testified on the subject of operating costs.....	5735	3257
249—S. P. Co., Pacific Lines, Comparisons between Tucson Div., Pacific Lines, and Salt Lake Div., showing trends in freight train and locomotive loading, and effect on fuel consumption.....	5736	3258
250—S. P. Co., Pacific Lines, Yuma, Ariz., to Lordsburg, N. M., Fuel consumption comparisons and estimated economies resulting from the adoption of long train operation.....	5740	3262
251—S. P. Co., Pacific Lines, Lordsburg, N. M., To El Paso, Tex., fuel consumption comparisons and estimated economies resulting from adoption of long train operation.....	5741	3263
252—S. P. Co., Pacific Lines, Summary of annual savings and annual increased costs in freight and passenger service between Los Angeles, Calif. and El Paso, Tex., following removal of restrictions of Arizona Train Limit Law, Year 1938.....	5742	3264
253—S. P. Co., Pacific Lines, Redispatch study, June and August, 1938, extra territorial effect of Arizona Train Limit Law between Ariz.-New Mexico State Line and El Paso, Texas.....	5743	3265
254—S. P. Co., Pacific Lines, Locomotive repair cost data for use in redispatch studies.....	5744	3266
255—S. P. Co., Pacific Lines, Redispatch study, locomotive repairs, Yuma to El Paso, for period April 4-30, 1940, Actual operation compared with redispatched operation, observing 70 car restriction and using present power and short sidings.....	5745	3267

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

	Original	Print
256—S. P. Co., Pacific Lines, Redispatch study summary of increased costs, Yuma to El Paso, period April 4-30, 1940, Actual operation compared with redispatched operation observing 70 car restriction and using present power and short sidings . . .	5746	3268
257—S. P. Co., Pacific Lines, Relation between Locomotive Shop repair costs, running repair costs, and total costs	5747	3269
258—S. P. Co., Pacific Lines, Redispatch study summary of savings, Yuma to El Paso, for period April 4-30, 1940, actual operation compared with redispatched operation, with no restriction and using AC power and long sidings	5748	3270
259—S. P. Co., Pacific Lines, Redispatch study, April 4-30, 1940, Actual operation compared with redispatched operation with no restriction and using AC power and long sidings, extra-territorial effect of Arizona Train Limit Law between Arizona-New Mexico State Line and El Paso, Texas	5749	3271
260—I.C.C. Rules governing monthly reports of Railway Accidents, effective 1-1-22 . . .	5750	3272
261—I.C.C. rules governing monthly reports of Ry. accidents effective on Jan. 1, 1922, Abstract of pages 22 and 23	5767	3289
262—Casualties to all classes of employees on duty, sustained in train and train service accidents, Class I Railroads of the U. S. reflected by statistics of I.C.C. years 1923-1938, inclusive	5778	3300
263—Casualties to road trainmen and enginemen on duty, all classes of service, sustained in train and train service accidents, Class I railroads of U. S. reflected by statistics of I.C.C. years 1923-1938, inclusive	5779	3301
264—Casualties to road freight trainmen and enginemen on duty. Sustained in train and train-service accidents Class I railroads of U. S. reflected by statistics of the I.C.C. years 1923-1938, inclusive	5780	3302
265—Casualties to road freight conductors, brakemen and flagmen on duty, sustained in train and train-service accidents, Class I Railroads of the U. S., reflected by statistics of the I.C.C. years 1923-1938, inclusive	5781	3303

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

	Original	Print
266—Casualties to road freight conductors, brakemen and flagmen, train service accidents caused by sudden stop, start, lurch or jerk of loco., car or train, all railroads of U. S., reflected by statistics of I.C.C. years 1923-1938, inclusive.....	5782	3304
267—Casualties to passengers on train in train and train-service accidents, class I railroads of U. S., reflected by statistics of the ICC, 1923-1938, incl.....	5783	3305
268—Casualties in highway grade crossing accidents in which automobiles were involved, all steam railways, reflected by statistics of the ICC, years 1923-1938, inclusive.....	5784	3306
269—Train accidents and resultant casualties, all railroads of the U. S. reflected by statistics of the ICC years 1923-1938, inclusive.....	5785	3307

VOL. VIII

270—Tabulation of data shown in summaries of accident investigation reports, I.C.C. Bureau of Safety, in so far as it relates to accidents involving road freight trains, including mixed trains handling freight cars, 1928-1939.....	5788	3310
271—Tabulation of data published in quarterly summaries of accident investigation reports, I.C.C. Bureau of Safety, in so far as it relates to accidents involving passenger trains in the U. S. 1934-1939.....	5814	3336
272—Casualties to all classes of employees on duty, all classes of service, sustained in train and train-service accidents, reflected by statistics of the I.C.C. years 1923-1938 inclusive.....	5827	3349
273—Casualties to trainmen on duty, all classes of service, sustained in train and train-service accidents, reflected by statistics of the ICC, 1923-1938, Inc.....	5828	3350
274—S. P. Co., Pacific Lines, Detail of casualties to all classes of employees on duty, sustained in train and train service accidents, road freight operation, reportable to the ICC, years 1923-1939 inclusive, State of Arizona.....	5829	3351

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

Original Print

- | | | |
|--|------|------|
| 275—S. P. Co., Pacific Lines, Detail of casualties to all classes of employees on duty, sustained in train and train-service accidents, road freight train operation, reportable to the I.C.C. years 1923-1939, inclusive, State of Nevada | 5842 | 3364 |
| 276—S. P. Co., Pacific Lines, comparison of casualties to all classes of employees on duty, all classes of service, sustained in train and train-service accidents, reportable to the I.C.C. for the years 1923-1939, incl. S. P. lines, Nevada and Arizona | 5850 | 3371 |
| 277—S. P. Co., Pacific Lines, Comparison of casualties to all classes of employees on duty, road freight train operation, sustained in train and train-service accidents reportable to the I.C.C. for years 1923-1939, inclusive, S. P. Lines States of Nevada and Arizona | 5851 | 3372 |
| 278—S. P. Co., Pacific Lines, casualties to all classes of employees on duty, road freight train operation, sustained in train and train service accidents reportable to the I.C.C. classified as to causes and classes of employees for the years 1923 to 1939, inclusive | 5852 | 3373 |
| 279—S. P. Co., Pacific Lines, comparison of casualties to road freight conductors, brakemen and flagmen on duty, sustained in train and train-service accidents reportable to the I.C.C. for the years 1923-1939, inclusive, S. P. Lines, Nev. & Ariz. | 5853 | 3374 |
| 280—S. P. Co., Pacific Lines, Comparison of casualties to road freight conductors, brakemen and flagmen on duty, sustained in train and train service accidents caused from sudden stopping, starting, lurch and jerk of train, reportable to the I.C.C. for the years 1923-1939, inclusive, S. P. Lines, Nevada & Arizona | 5854 | 3375 |
| 281—Fatalities, subsequent fatalities or amputation of limbs, road freight conductors, brakemen and flagmen, train and train service accidents, reported to the I.C.C. 1923-1939, inclusive. S. P. Lines, Nevada and Arizona | 5855 | 3376 |

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

	Original	Print
282—S. P. Co., Pacific Lines, casualties sustained in train and train service accidents from all causes by all classes of employees on duty resulting from the operation of road freight trains, reportable to I.C.C. 3 years 1923-1925 compared with 3 years 1937-1939, State of Nevada.....	5856	3377
283—S. P. Co., Pacific Lines, casualties to all classes of employees off duty, road freight train operation sustained in train and train-service accidents reportable to the I.C.C., years 1923-1939, inclusive, State of Arizona.....	5857	3378
284—(Same as 283 except for Nevada).....	5859	3380
285—Casualties to persons carried under contract (livestock caretakers, banana messengers, etc.) road freight trains, sustained in train and train service accidents, reportable to the I.C.C. for years 1923-1939, inclusive, S. P. Co. in States of Nevada and Arizona.....	5861	3382
286—S. P. Co., Pacific Lines, derailments caused by defects in or failures of freight car equipment, road freight trains, including mixed, reportable to the I.C.C. years 1923-1939, incl. State of Arizona.....	5862	3383
287—S. P. Co., Pacific Lines, derailments caused by defects in or failures of freight car equipment, road freight trains, including mixed reportable to I.C.C. 1923-1939, incl. State of Nevada.....	5863	3384
288—S. P. Co., Pacific Lines, comparison of total derailments caused by defects in or failure of freight car equipment shown in Exh. No. 287 for State of Nev. and Exh. No. 286 for State of Arizona, years 1923 to 1939, inclusive.....	5864	3385
289—S. P. Co., Pacific Lines, detail of train accidents, road freight train operation reported to ICC, years 1923-1939, incl. State of Arizona.....	5865	3386
290—S. P. Co., Pacific Lines, detail of train accidents, road freight train operation reported to the I.C.C., years 1923-1939, incl. State of Nevada.....	5878	3399

Record from Superior Court of State of Arizona in and for
County of Pima—Continued
Statement of evidence—Continued
Defendant's exhibits—Continued

VOL. IX

	Original	Print
291—Casualties to all classes of persons except trespassers, sustained in train and train service accidents, while on, employed on, or getting on or off passenger trains, reportable to the I.C.C. 1923 to 1939, incl. S. P. lines in State of Nevada.....	5888	3409
292—Casualties to all classes of persons except trespassers, sustained in train and train service accidents while on, employed on, or getting on or off passenger trains, reportable to the I.C.C. years 1923-1939, inclusive, S. P. Lines in State of Arizona ..	5892	3412
293—Highway grade crossing accidents in which automobiles were involved, all railroads, State of Arizona, reflected by statistics of I.C.C. and those which occurred on lines of S. P. Co., years 1923-1939, inclusive.....	5902	3422
294—Detail of casualties to all classes of persons, except trespassers, operation of passenger trains, S. P. Co., State of Arizona, March and April, 1940.....	5903	3423
295—Detail of train and train service accidents road freight train operation reportable to the I.C.C., S. P. Co., in State of Arizona, April 1940.....	5904	3424
296—A. T. & S. F. Ry., Casualties to road freight trainmen and enginemen on duty while on or off road freight trains (through, local and mixed). Main line territory between Clovis and Gallup, New Mexico, compared with main line territory between Gallup, N. M., and Needles, Calif., as reported to the I.C.C., years 1923-1939, inclusive.....	5905	3425
297—S. P. Co., Pacific Lines, estimated cost of a terminal at the Arizona-New Mexico State Line for the reconstituting of freight trains ..	5906	3426
298—S. P. Co., Pacific Lines, Yuma, Ariz. to El Paso, Tex. via Gila and Lordsburg, estimated number of meets and passes eliminated by long train operation June and August, 1938, expanded to annual basis.....	5907	3427

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Defendant's exhibits—Continued

Original Print

299—S. P. Co., Pacific Lines, Redispatch study— June and August, 1938, extra-territorial effect of Arizona Train Limit Law between Arizona-New Mexico State Line and El Paso, Texas	5909	3429
305—Statement of main track mileage, S. P. Co. main and branch lines, State of Nevada and Arizona, years 1923-1939	5910	3430
313—Classes and numbers of employees on the Tucson Division for each of the calendar years 1930-1940, inclusive, transportation division	5911	3431
314—AT&SF freight tonnage ratings of loco- motives between Needles, Calif., and Clovis, New Mexico	5912	3432
315—Redispatch Study — locomotive mileage, Yuma, Ariz., to El Paso, Tex., for the period June and Aug. 1938	5913	3433
316—Same as above for period April 4-30, 1940. Actual operation compared with redis- patched operation with no restriction and using AC power and long sidings	5914	3434
317—Redispatch study—locomotive shop repairs, Yuma, Ariz., to El Paso, Texas, for period June and Aug. 1938	5915	3435
318—Same as above for period April 4-30, 1940. Actual operation compared with redis- patched operation with no restriction and using AC power, and long sidings	5916	3436
Plaintiff's exhibits:		
321—Form S-2370, Time Return and Delay Re- port of engine and train employees, April 12, 1940	5917	3437
322—Conductor's Time Return and Delay Re- port, April 13, 1940	5918	3438
323-324-325—Form T's—Hausman Accidents	5919	3439
326—Warning to caretakers and others	5925	3447
327—Excerpts from Santa Fe instructions for operating and maintaining air-brake appa- ratus	5927	3445
328—Excerpts from S. P. Co. (Pac. Lines) air brake rules and regulations	5935	3454
334—Highway grade crossing accidents where auto involved: Table 24, I.C.C. Accident Bulle- tin, Arizona-New Mexico-Nevada, 1929- 1939, incl.	5941	3461

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Plaintiff's exhibits—Continued

	Original	Print
335—Highway grade crossing accidents, Table 24, I.C.C. Accident Bulletin, Arizona-New Mexico-Nevada, 1929-1939, inclusive	5942	3462
336—Grade crossing accidents classified as to trains striking autos and autos running into trains. I.C.C. Accident Bulletin, Table 50, Years 1935 to 1939, inclusive	5943	3463
337—Casualties to non-trespassers, Table 51, I.C.C. Accident Bulletins, Arizona-Nevada	5944	3464
338—S. P. Co., Pac. Lines, Casualties to em- ployees. Train and train service acci- dents. Freight service in the State of New Mexico, year 1930	5945	3465
339—Accident report of the Santa Fe occurring on the Albuquerque Division on July 27, 1939	5952	3472
350—Preliminary revised population estimate for continental United States	5965	3482
351—S. P. Co., Pac. Lines. Casualties to em- ployees, Los Angeles Division, freight service, train and enginemen, year 1930	5969	3483
362—S. P. Co., Pac. Lines, Casualties to passengers and passenger employes, train and train service accidents, State of New Mexico, year 1930	5990	3501
363—Same as above for Los Angeles Division	5996	3507
364—S. P. Co., Pacific Lines in New Mexico, Casu- alties to train and engine service employees, year 1940	6006	3518
365—S. P. Co., Pacific Lines, Los Angeles Divi- sion, Casualties to train and engine service employees, year 1940	6008	3519
366—Same as above for State of Arizona	6011	3522
367—Same as above for Salt Lake Division	6013	3524
367-a—Casualties to passengers and passenger employees, year 1940; S. P. Co., Pacific Lines, State of Nevada	6016	3526
368—Same as above, Lines in New Mexico	6017	3527
369—Same as above for the State of Arizona	6018	3528
370—Same as above for Los Angeles Division	6020	3529
382—I.C.C. Bureau of Statistics, Accident Bulle- tin 105, Calendar Year 1936, Table 21	6021	3530
383—Same as above, Table 50	6022	3531
384—Same as above, Table 51	6023	3532

Record from Superior Court of State of Arizona in and for
County of Pima—Continued

Statement of evidence—Continued

Original Print

Defendant's exhibits:

386—Comparison of casualties to employees on duty, and non-trespassers. Road freight train operation sustained in train and train service accidents, reported to the I.C.C., years 1930-1940, inclusive. S. P. Co. Pac. Lines, Los Angeles Division	6024	3533
387—Same as above for the State of New Mexico	6040	3548
388—Train accidents reported to the I.C.C., years 1930-1940 inclusive, S. P. Co., Pacific Lines, State of New Mexico	6049	3558
389—Comparison of number and accident rate per million freight train miles and per one hundred million freight train car miles. Derailment due to defects in or failures of freight car equipment, New Mexico, Arizona and Nevada, 1930-1940 inclusive	6056	3565
390—Train accidents, showing classes and causes, Class I Railroads of the U. S., reflected by the statistics of the I. C. C., years 1923-1939, incl.	6057	3566
391—Train accidents, classified, casualties sustained therein, etc. State of Arizona	6058	3567
392—Same as above for State of Nevada	6059	3568
393—Consist of train No. 3, departing Tucson April 12, 1940, Conductor G. Shaw, Engineer B. Cheek	6060	3569
394—Consist train No. 44, departing Yuma April 13, 1940	6061	3570
395—1940 service records of conductors A. T. Ash, L. A. Fail, and E. V. Shaw	6062	3571
396—American Railway Assn., Mechanical Division, specifications for freight brakes, standard, adopted 1933	6063	3572
397—Delays to freight and passenger trains associated with equipment, or defects therein as reported by conductors on time returns and delay reports, Jan. 1 to June 30, 1940, Lordsburg, New Mexico, to El Paso, Texas	6069	3578
Findings of fact and conclusions of law	6070	3879
Index to findings and conclusions	6071	3879
Note re findings and conclusions	6077	3887
Judgment	6278	3887
Memorandum opinion, Udall, J.	6281	4042
Notice of appeal	6296	4054
Proceedings in Supreme Court of Arizona	6297	4055
Opinion, Stanford, J.	6297	4055
Dissenting opinion, Ross, J.	6313	4068

	Original	Print
Mandate.....	6319	4072
Judgment of Superior Court on mandate.....	6323	4073
Petition for appeal.....	6324	4074
Assignments of error.....	6328	4077
Order allowing appeal.....	6334	4081
Bond on appeal..... (omitted in printing)	6336	
Citation and service..... (omitted in printing)	6341	
Praecipe for transcript of record.....	6343	4082
Appellee's praecipe for additional record.....	6347	4085
Clerk's certificate..... (omitted in printing)	6349	
Statement of points to be relied upon.....	6353	4086
Stipulation as to printing of record.....	6356	4087
Order noting probable jurisdiction.....	6358	4088

[fol. 1]

[File endorsement omitted]

**IN THE SUPERIOR COURT OF THE STATE OF
ARIZONA IN AND FOR THE COUNTY OF PIMA**

No. 20087

STATE OF ARIZONA, ex rel. Joe Conway, Attorney General of
the State of Arizona, Plaintiff

vs.

SOUTHERN PACIFIC COMPANY, a corporation, Defendant

COMPLAINT—Filed April 19, 1940

Now comes the State of Arizona by Joe Conway, Attorney General of the State of Arizona, and brings this action on behalf of the State of Arizona, a body politic, against Southern Pacific Company, a corporation organized and existing under the laws of the State of Kentucky and operating a railroad in the State of Arizona.

For a first cause of action plaintiff alleges:

That on May 16, 1912, the Governor of the State of Arizona approved an act of the Legislature of the State of Arizona entitled "An act limiting the number of cars in a train," which act was afterwards, on referendum at a general state election held November 5, 1912, approved by a majority of the voters of said state voting at said election (Laws, 1913, Referendum, p. 15; Sections 2166-2168, Revised Statutes of Arizona, 1913, Civil Code; Section 647 Revised Code of Arizona, 1928), and ever since has been and now is in full force and effect. Said Act has no preamble [fol. 2] and reads as follows:

"Section 1. It shall be unlawful for any person, firm, association, company or corporation, operating any railroad in the state of Arizona, to run, or permit to be run, over his, their, or its line of road, or any portion thereof, any train consisting of more than seventy freight, or other cars, exclusive of caboose.

"Section 2. It shall be unlawful for any person, firm, association, company or corporation, operating any railroad in the state of Arizona, to run, or permit to be run, over his, their, or its line of road, or any portion

thereof, any passenger train consisting of more than fourteen cars.

"Section 3. Any person, firm, association, company or corporation, operating any railroad in the state of Arizona, who shall wilfully violate any of the provisions of this act, shall be liable to the state of Arizona for a penalty of not less than one hundred dollars, nor more than one thousand dollars, for each offense; and such penalty shall be recovered, and suits therefor brought by the attorney general, or under his direction, in the name of the state of Arizona, in any county through which such railroad may be run or operated, provided, however, that this act shall not apply in cases of engine failures between terminals.

"Section 4. All acts and parts of acts in conflict with the provisions of this act are hereby repealed."

That said Act is generally known as, and is hereinafter referred to as, the Arizona Train Limit Law.

That said defendant is, and was at all times herein mentioned, operating a railroad in and through the State of Arizona; that in violation of the Arizona Train Limit Law said defendant, on April 4, 1940, wilfully run, or permitted to be run, over its railroad or line of road in the County of Pima, State of Arizona, a freight train consisting of more than seventy freight, or other cars, exclusive of caboose; [fol. 3] that said freight train consisted of ninety-one freight, or other cars, exclusive of caboose, and was run by defendant, or permitted by defendant to be run, over defendant's railroad or line of road westward from Tucson in the county of Pima, State of Arizona, leaving Tucson at or about 12:30 o'clock P. M. on said 4th day of April, 1940.

Plaintiff further alleges that by reason of the said violation of said Arizona Train Limit Law said defendant is liable to the plaintiff, State of Arizona, in an amount not less than one hundred dollars nor more than one thousand dollars, to be fixed by the court.

For a second cause of action plaintiff alleges:

That on May 16, 1912, the Governor of the State of Arizona approved an act of the Legislature of the State of Arizona entitled "An act limiting the number of cars in a train," which Act was afterwards, on referendum at a gen-

eral state election held November 5, 1912, approved by a majority of the voters of said state voting at said election (Laws, 1913, Referendum, p. 15; Sections 2166-2168, Revised Statutes of Arizona, 1913, Civil Code; Section 647 Revised Code of Arizona, 1928), and ever since has been and now is in full force and effect. Said Act has no preamble and reads as follows:

"Section 1. It shall be unlawful for any person, firm, association, company or corporation, operating any railroad in the state of Arizona, to run, or permit to be run, over his, their, or its line of road, or any portion thereof, any train consisting of more than seventy freight, or other cars, exclusive of caboose.

[fol. 4] "Section 2. It shall be unlawful for any person, firm, association, company or corporation, operating any railroad in the state of Arizona, to run, or permit to be run, over his, their, or its line of road, or any portion thereof, any passenger train consisting of more than fourteen cars.

"Section 3. Any person, firm, association, company or corporation, operating any railroad in the state of Arizona, who shall wilfully violate any of the provisions of this act, shall be liable to the state of Arizona for a penalty of not less than one hundred dollars, nor more than one thousand dollars, for each offense; and such penalty shall be recovered, and suits therefor brought by the attorney general, or under his direction, in the name of the state of Arizona, in any county through which such railroad may be run or operated, provided, however, that this act shall not apply in cases of engine failures between terminals.

"Section 4: All acts and parts of acts in conflict with the provisions of this act are hereby repealed."

That said Act is generally known as, and is hereinafter referred to as, the Arizona Train Limit Law.

That said defendant is, and was at all times herein mentioned, operating a railroad in and through the State of Arizona; that in violation of the Arizona Train Limit Law said defendant, on March 2, 1940; wilfully run, or permitted to be run, over its railroad or line of road in the County of Pima, State of Arizona, a passenger train consisting of more

than fourteen cars; that said passenger train consisted of sixteen cars, and was run by defendant, or permitted by defendant to be run, over defendant's railroad or line of road westward from Tucson in the County of Pima, State of Arizona, leaving Tucson at or about 5:45 o'clock P. M. on said 2nd day of March, 1940.

[fol. 5] Plaintiff further alleges that by reason of the said violation of said Arizona Train Limit Law said defendant is liable to the plaintiff, State of Arizona, in an amount not less than one hundred dollars nor more than one thousand dollars, to be fixed by the Court.

Wherefore, the plaintiff, State of Arizona, prays judgment:

1. That the Court fix and determine the amount of the penalty, not less than one hundred dollars nor more than one thousand dollars, to be adjudged against the defendant, Southern Pacific Company, by reason of plaintiff's first cause of action.

2. That plaintiff, State of Arizona, have judgment against the defendant, Southern Pacific Company, on said first cause of action in the amount so fixed and determined by the Court.

3. That the Court fix and determine the amount of the penalty, not less than one hundred dollars nor more than one thousand dollars, to be adjudged against the defendant, Southern Pacific Company, by reason of plaintiff's second cause of action.

4. That plaintiff, State of Arizona, have judgment against the defendant, Southern Pacific Company, on said second cause of action in the amount so fixed and determined by the court.

Joe Conway, Attorney General, W. E. Polley, Assistant Attorney General.

Charles L. Strouss, 703 Heard Building, Phoenix, Arizona, Of Counsel.

[fol. 6]

[File endorsement omitted]

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA, IN AND FOR
THE COUNTY OF PIMA

[Title omitted]

ORDER STAYING OTHER PROCEEDINGS—Filed April 19, 1940

On the affidavit and motion of the Attorney General of
the State of Arizona,

It Is Now Ordered that all proceedings by any state of-
ficer or officers, other than the proceedings herein, under the
Arizona Train Limit Law (Laws, 1913, Referendum, p. 15;
Section 2166-2168 Revised Statutes of Arizona, 1913, Civil
Code; Section 647 Revised Code of Arizona, 1928) be, and
are hereby, stayed and restrained pending the determination
of this proceedings.

Done in open court this 19 day of April, 1940.

Wm. Hall, Judge.

[fol. 7]

[File endorsement omitted]

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA IN AND
FOR THE COUNTY OF PIMA

[Title omitted]

ANSWER—Filed May 9, 1940

Southern Pacific Company, a corporation, the above-
named defendant, for answer to the complaint on file in
the above-entitled cause, admits, alleges, and denies as
follows:

I

For answer to the alleged first cause of action set forth
in said complaint:

1. Defendant admits that the statute of Arizona known
as the Arizona Train-Limit Law (Arizona Revised Stat-
utes, 1928, Section 647) was enacted in 1912, and that the
text of said statute is correctly set forth in said first cause
of action.

2. Defendant admits that, on April 4, 1940, substantially as in said first cause of action alleged, it operated or permitted the operation of a freight train consisting of more than 70 cars, exclusive of caboose, and that said train was operated over its line of railroad in Pima County, westward from Tucson, departing therefrom about 12:30 P. M. on April 4, 1940, and in this behalf defendant alleges that said train was then and there being operated in interstate commerce, and consisted in large part of cars moving in interstate commerce and carrying interstate traffic; but defendant denies that in so causing or permitting the operation of said train, or in any other respect, it acted wilfully, or that such operation of said train was in any respect, or at all, a wilful violation of said Train-Limit Law.

3. Defendant denies that it has wilfully or otherwise violated said Train-Limit Law, either on the date or in the manner alleged in said purported first cause of action, or otherwise, or at all; and denies that it is liable to the plaintiff, by reason either of the circumstances alleged in said first cause of action, or otherwise, in either the amounts specified in said first cause of action, or in any other sum or amount whatsoever.

II

For answer to the alleged second cause of action set forth in said complaint:

1. Defendant admits that the statute of the State of Arizona known as the Arizona Train-Limit Law (Arizona Revised Statutes, 1928, Section 647) was enacted in 1912, and that its text is correctly set forth in said second cause of action.

2. Defendant admits that, on March 2, 1940, substantially as in said second cause of action alleged, it operated or permitted the operation of a passenger train consisting of more than 14 cars, and that said passenger train was operated over its line of railroad in Pima County, westward from Tucson, departing therefrom at or about 5:45 o'clock P. M. on said March 2, 1940; and in this behalf defendant alleges that said passenger train was then and there being operated in interstate commerce, and consisted

in large part of cars moving in interstate commerce and carrying interstate traffic; but defendant denies that in so causing or permitting the operation of said passenger train, or in any other respect, it has acted wilfully, or that such operation of said passenger train was in any respect a wilful violation of said Train-Limit Law.

[fol. 9] 3. Defendant denies that it has wilfully, or otherwise, violated said Train-Limit Law, either upon the date or in the manner set forth in said second cause of action, or otherwise, or at all; and denies that it is liable to the plaintiff, by reason either of the circumstances alleged in said second cause of action, or otherwise, in either the amounts specified in said second cause of action, or in any other sum or amount whatsoever.

III

For a first, separate and affirmative defense to said complaint, and to each and both of the alleged causes of action therein set forth, defendant alleges and shows that said Train-Limit Law is wholly void, invalid, unconstitutional, and unenforceable as to the defendant, and as to each and all of the train operations of the defendant, both within and without the State of Arizona, for the reasons hereinafter set forth, as follows:

1. Status of Defendant as an Interstate Common Carrier by Rail.

Defendant now is, and at all times herein mentioned, has been, engaged as a common carrier in interstate commerce, in the operation of line of railroad situated in the States of Oregon, California, Nevada, Utah, Arizona, Texas and New Mexico, and in the transportation of passengers and property from, to and between points in each and all of said states. At all times herein mentioned defendant, as such interstate common carrier by railroad, has been and now is subject to the provisions of the Act of Congress approved February 4, 1887, and Acts amendatory thereof and supplementary thereto, known as the Interstate Commerce Act.

2. Description of Defendant's Lines of Railroad.

Defendant's main lines extend from San Francisco, California, to Portland, Oregon, and across the State of Nevada

to Ogden, Utah; and extend also from San Francisco, south-[fol. 10] easterly to Los Angeles, California, and thence to Yuma, Arizona, and thence across the southern part of the States of Arizona and New Mexico, via El Paso, Texas, to Tucumcari, New Mexico. At each of said points other than Yuma, as well as at numerous other points, defendant's lines connect with the lines of other interstate rail carriers, and thus enter into and become part of through routes for the transportation of freight and passengers between all parts of the United States, and to and from adjacent foreign countries.

The major portion of the interstate freight traffic transported by defendant across or partly in Arizona over its southern Arizona route is handled by way of the main line which extends through Indio, California, Yuma, Maricopa and Tucson, Arizona, and Lordsburg, New Mexico, to El Paso, Texas. Defendant also has an alternate main line, which departs from the Yuma-Maricopa-Lordsburg line just described at Wellton, Arizona, and runs thence northeasterly to Phoenix, Arizona, and thence southeasterly to Picacho, Arizona, where it joins the Yuma-Maricopa-Lordsburg line. A second alternate main line of the defendant leaves the Yuma-Maricopa-Lordsburg line at Mescal, Arizona (about 30 miles easterly from Tucson) running thence via Douglas, Arizona, to El Paso, Texas. The three lines of the defendant just described, considered together, afford to it practically two lines for the entire distance from Yuma to El Paso; but, except for short stretches of double-track near Yuma, Phoenix, and El Paso, and a double-track district about 43 miles in length between Stockham and Mescal, Arizona, these lines are operated as single-track lines.

Passenger traffic which originates in or crosses Arizona uses all these lines; but because the route between Yuma and Tucson via Phoenix is somewhat longer than via Maricopa, through interstate freight trains between Yuma and Tucson are generally routed via Maricopa. Between Tucson and El Paso, about 65 per cent of the through interstate freight traffic is moved via Lordsburg, and about 35 per cent via Douglas.

Defendant's main lines cross southern Arizona and New Mexico on comparatively light grades and through much level territory. They are well constructed, according to the

best modern railroad standards, and capable of sustaining the heaviest and most powerful locomotives owned or operated by defendant. They are equipped throughout with automatic block signals, and numerous other devices promoting safety of operation. The operating conditions upon said main lines generally are relatively favorable to speed, safety, and economy of operation.

The operating conditions upon defendant's main lines across Nevada and Utah are closely similar to those upon the main lines across Arizona and New Mexico. Said lines in Nevada and Utah are well constructed, according to the best modern railroad standards, and are equipped throughout with automatic block signals and numerous other devices promoting safety of operation.

3. Effect of the Train-Limit Law upon Defendant's Train Operations, particularly Freight Trains.

(a) Railroad operating conditions, both on defendant's lines in Arizona, and elsewhere, and on railroads throughout the United States generally, differ substantially from the operating conditions which existed in 1912, when the Arizona Train-Limit Law was passed, in that since 1912, and more especially since 1920, great improvements have been made in both road and equipment. Tracks, roadbeds, and bridges have been made stronger; grades and curves have been reduced or eliminated; side tracks and passing tracks have been lengthened; block signals and other safety devices have been installed; safer and more powerful locomotives, and stronger freight and passenger cars have been built and acquired. The greater part of these improvements has taken place since 1920, and has been accomplished by the expenditure of large sums of money, [fol: 12] which expenditures in many instances have been sanctioned by the Interstate Commerce Commission, under Section 20a of the Interstate Commerce Act. This is particularly true with respect to the acquisition of large and powerful locomotives designed and used for the handling of trains consisting of more than 70 freight cars, or more than 14 passenger cars. These and other expenditures have been made largely for the purpose of increasing the lengths and the loading of trains, and promoting the safety of handling thereof, so as to bring about and maintain safer and more efficient and economical operations.

(b) The locomotives and cars now used on defendant's main lines in Arizona, and elsewhere, have been greatly and continually improved since 1912, and have thus been made stronger and better able to withstand the most arduous and serious conditions. The standard locomotives generally used by defendant at the present time have been and are built with heavier frames and running gears, improved and strengthened brake equipment, draft gears and attachments, and air pumps of increased capacity. The boilers also have been much improved; and many if not all of such locomotives are equipped with feed-water heaters, super-heaters, and other modern devices designed to promote safety, efficiency and economy in operation.

The freight and passenger cars used in defendant's trains in the State of Arizona have likewise been greatly improved since 1912, and particularly since 1920. In 1912 about 40 per cent of the freight cars of the defendant were equipped with wooden underframes; that type of car has now been entirely withdrawn from main-line and interchange service, and all freight cars now used in such service are equipped with steel underframes. Modern draft gears and modern standard single-plate cast-iron wheels have been installed upon defendant's freight equipment. Improvements have been made in the air-brake triple-[fol. 13] valves in such freight cars, the result of which is practically to eliminate unintended emergency-brake applications.

(c) Since 1920 defendant has spent approximately \$9,000,000.00 in Arizona, primarily for the purpose of improving its tracks, track facilities and terminals, and in installing block signals and other safety devices. Defendant has also invested about \$13,000,000.00 further in Arizona, since 1920, in the rehabilitation, construction, and reconstruction of the alternate main line from Wellton through Phoenix to Picacho, heretofore described. The track, roadbed, and bridges on the defendant's main lines in Arizona and elsewhere are capable of carrying the heaviest locomotives owned by said defendant; and there is no reason, from the standpoint of climatic conditions, or track, grades, or curvatures, or the strength or capacity of road and equipment now owned and available, why defendant could not at once commence the operation, on its main lines in Arizona and in the adjacent states of California and New

Mexico, where the Arizona Train-Limit Law operates to restrict the length of trains, of a very substantial number of freight-train units of substantially more than 70 freight or other cars, and passenger-train units of substantially more than 14 passenger-cars, and thus operate its lines of railroad in said territory more safely, efficiently, and economically, and in line with the best modern railroad practices, and thereby secure the benefits of immediate, substantial, and much-needed operating economies.

(d) Prior to 1912, freight trains containing more than 70 cars were operated mostly on favorable grades, or consisted in whole or in large part of empty cars. Principally by reason of improvements in roadbed, equipment, and operating methods, made since that time, heretofore described in part, the operation of through trains containing more than 70 freight or other cars, either loaded or empty cars or both, on main trunk lines, including those of defendant, has become and ever since about the year 1924 has been, and now is, the common standard railroad practice throughout the United States, except in Arizona, and the adjacent portions of California and New Mexico where the Arizona Law operates with extraterritorial effect; and the maximum lengths of such freight trains, outside of Arizona, are very much greater than those permitted in said state.

Except in Arizona and adjacent territories affected by said Train-Limit Law, freight is now transported between all parts of the United States, in trains of more than 70 cars, upon dependable schedules; and such schedules are one-half to one-third faster than prevailed prior to 1924. Such common standard operation of freight trains of more than 70 cars, upon such faster schedules, has made possible the nationwide distribution and consumption of the perishable and other products (including livestock) of California and Arizona, as well as other states and localities, moving in interstate and foreign commerce over the lines of defendant and its railroad connections.

Trains of greater lengths than 70 freight or other cars are handled by locomotives of modern type, of which those owned and operated by the defendant are typical, whose runs now extend for several hundred miles, in many cases passing through or across two or more states. The efficiency and economy of operation of such locomotives de-

pend upon the extent to which the trains which they handle are heavy enough so that their tractive power may be utilized to the fullest practicable extent. The improved methods of operation, of which the operation of trains of more than 70 cars is an essential part, have practically eliminated car shortages, which were frequently experienced prior to 1924, and have made it possible to reduce greatly the stocks of merchandise formerly required to be carried in order to protect against traffic congestion and delay: all of which [fol. 15] has been of great benefit to the commerce of the country, and particularly to the states and communities served by defendant's lines, which is and are largely dependent upon prompt, efficient, and reliable transportation at reasonable rates.

(e) The operation of freight trains containing substantially more than 70 freight or other cars, exclusive of caboose, and of passenger trains containing substantially more than 14 cars, subject to the requirements of traffic (which method of operation is herein, for convenience, referred to as "standard long-train operation"), is a general practice on the main trunk lines of all the major steam railroads throughout the United States, and on the main lines of railroad of the defendant, and its principal competitors and connections, except in Arizona and contiguous territory where the Arizona Train-Limit Law has extraterritorial effect. The operating conditions under which such standard long-train operation is carried on are substantially as favorable, generally speaking, as those on the main lines of the defendant in Arizona. The practice of such standard long-train operation has not retarded and does not retard, but on the contrary expedites materially the movement of the traffic carried therein, and does not delay, but on the contrary promotes and makes possible the early delivery of such traffic.

Freight trains of more than 70 freight or other cars, exclusive of caboose, and passenger trains of more than 14 cars, are commonly, safely, and economically operated through the United States, outside of Arizona, over lines of railroad substantially similar to the main lines of the defendant in Arizona; and there is no reason, from the standpoint of safety, or otherwise, why the length of defendant's freight or passenger trains in Arizona should be limited as required by the Arizona Train-Limit Law.

(f) By its terms the Arizona Train-Limit Law applies to [fol. 16] and regulates trains only within Arizona. However, it is wholly impracticable to split up or consolidate trains at state boundary lines, unless terminals are there located. While defendant has a terminal at Yuma, adjoining the California-Arizona boundary line, its nearest New Mexico terminal upon the Yuma-Maricopa-Lordsburg line is at Lordsburg, New Mexico, about 23 miles east of the Arizona line. Upon the Tucson-Douglas-El Paso line there is no terminal between the Arizona-New Mexico boundary, and the terminal at El Paso, Texas, about 166 miles east of said boundary. No facilities now exist at or adjacent to either of the points where defendant's two said main lines cross the Arizona-New Mexico boundary, whereby westbound trains of greater lengths than permitted by the Arizona Law could be reduced in length so as to conform to said law, or eastbound trains conforming to the law's limitations consolidated into the larger units permitted by the laws of New Mexico; and no such facilities could be constructed at or adjacent to either or both of said boundary-line points except at great expense.

The inevitable result of the Arizona Law is therefore to control completely train lengths between the boundary line of Arizona and the aforesaid terminals in New Mexico and Texas nearest thereto. But, on account of the transportation service required and furnished for eastbound perishable freight, traffic requirements ordinarily forbid its delay, either while trains are being split up at the first terminal west of or at the Arizona boundary line, or while trains are being consolidated at the first terminal east of Arizona. Consequently, in many instances, eastbound perishable freight trains, originating at southern California points, must be made up into trains not longer than are permitted by the law, at such points of origin; and such short trains must be transported intact as far east as El Paso, Texas, more than 160 miles east of Arizona, at which point, because of the requirements of re-icing and re-classification [fol. 17] for diversion purposes, consolidation into larger train units may be effected with a minimum of interference and delay. The locomotive power and crews used to handle eastbound trains, of lengths conforming to the Arizona Law, from their originating points in California to Yuma, and from Lordsburg to El Paso, must be returned

to their western termini; and it is therefore necessary either to run short (i. e., Arizona-size) westbound trains from El Paso and from Yuma, or to bring back the locomotives without load and the crews without work, but under pay.

(g) Solely by reason of defendant's compliance with said Arizona Train-Limit Law, the average and the maximum lengths of defendant's freight trains operated upon its aforesaid main lines across southern California, Arizona and New Mexico have been, now are and will continue to be greatly reduced below the average and maximum lengths which otherwise would obtain; by reason of which compliance with said Train-Limit Law, defendant has been compelled and will continue to be compelled to operate a substantially larger number of such trains and therefore to produce, as a result of such operations, a substantially greater number of train miles and locomotive miles for the handling of the same absolute volume of traffic, whether measured in cars handled or in car miles produced. The effect of such compliance with said Train-Limit Law is not and will not be confined to Arizona; for, as aforesaid, said Train-Limit Law operates and will continue to operate regularly and completely to control the lengths of defendant's freight trains, and the number thereof, to be operated, not only upon defendant's lines in Arizona, but also upon its lines in California at least as far west as Indio, and upon its lines in New Mexico and Texas at least as far east as El Paso, Texas.

Detailed cost studies, made by the defendant show that the additional financial burden to which it is subjected by [fol. 18] reason of the law, upon that portion of its main line which extends from Indio, California, via Yuma, Maricopa, and Lordsburg, to El Paso, amounts to more than \$300,000.00 each year, which figure relates to freight train operations upon said line only, and does not include any additional expense imposed upon and incurred by reason of the limitation of the law upon the lengths of passenger trains. If it were not for the law, substantial additional savings could also be made by the defendant in the operation of its freight trains upon its auxiliary main line through Phoenix, and its auxiliary main lines from Tucson via Douglas to El Paso, both of which main lines constitute portions of its through routes from California and Arizona

to destinations east thereof; although neither of these routes was included in the above mentioned detailed cost studies made by the defendant.

Substantial additional savings, also not included in said cost study or in the above figure of \$300,000.00, would also be made by defendant, by running and thus utilizing to the fullest practicable extent the tractive power of large locomotives, between points outside of Arizona and points in said state; and by shifting such large locomotives between the Arizona lines and similar lines outside of Arizona, in order to take care of peak seasonal business, thereby reducing the aggregate number of locomotives required and increasing the use and efficiency of the locomotives used. From the standpoint of aggregate power, large locomotives cost less in proportion to their tractive effort than do smaller ones; and under standard long-train methods of operation defendant's investment in motive power would be reduced because less total tractive power, at a lower cost per unit, would be required to handle the total traffic. Furthermore, under standard long-train operation, substantially less fuel would be required, so that the cost of hauling company fuel would be substantially reduced.

[fol. 19] (h) The standard long-train method of operation, heretofore and presently followed by defendant, except in Arizona and the adjacent districts where the Arizona Law operates with extraterritorial effect, results in safe, efficient and economical operation, at unit costs which are greatly reduced as compared to those experienced in prior years, and are also less than those incurred in Arizona and the contiguous territory where the Train-Limit Law operates with extraterritorial effect. Solely because of the Arizona law, defendant now is and will continue to be subjected to irreparable and continuing financial burden and expense amounting to at least \$300,000.00 per year, being the difference between the expense of the short-train method of operation required by the Arizona Law, and the expense of the standard long-train method of operation heretofore defined, which is presently being followed elsewhere than in Arizona and adjacent territory, and would be adopted and followed in Arizona and said adjacent territory if it were not for the Arizona Law.

(i) The effect of the law is greatly and directly to interfere with and delay defendant's interstate freight traffic

while in the course of transportation out of, into, across, and within Arizona; and also greatly, directly and unreasonably to delay and interfere with the interstate freight traffic moving on defendant's main lines in California and New Mexico; because, as heretofore stated, the trains on those lines, destined to points within or beyond Arizona, must be initially made up, or split up either at the nearest terminals to Arizona or at terminals farther removed, so as to conform to the restrictions of the Arizona statute; and trains moving across Arizona, or from points within that state, destined to points in adjoining states or beyond, must be consolidated, either at the first terminals outside of Arizona or at terminals farther removed, so as to avoid carrying them, with the increased operating and other expenses incident to such short-train operation, until they reach their destinations; and also because the increase in the number of trains run, inevitably resulting from the operation of the law, causes the number of meetings and passings of the trains, both freight and passenger, incident to the operation of defendant's lines of railroad, to be greatly and disproportionately increased, over and above those which would be required if it were not for the law, with resulting delay to each and all of the trains involved in such meetings and passings.

4. Effect of the law upon defendant's passenger-train operations.

(a) The passenger-train provisions of said Train-Limit Law are wholly arbitrary and unreasonable, and without any relation whatsoever to safety, efficiency, or economy of operation, and in fact result in imposing direct and irreparable financial burdens upon defendant, and in increased hazards; moreover, the law has an even greater extraterritorial effect upon passenger-train than upon freight-train operation. While the financial burden imposed upon passenger-train operation is not as great as that imposed by the law upon freight-train operation, nevertheless it is substantial in amount.

Except in the State of Arizona and in contiguous territory affected by the Arizona Train-Limit Law, passenger trains of more than 14 cars are regularly operated by defendant, and by other railroads generally, whenever and wherever traffic requirements make such operation advis-

able; and in the aggregate great numbers of such passenger trains are operated. The competition of other forms of transportation makes it imperatively necessary that passenger-train operation be carried on with the utmost economy.

Because of the Arizona Train-Limit Law, many passenger trains of the defendant must be initially made up, or, before reaching that state, broken up, so as to comply with [fol. 21] the limitations of said law. In order to minimize the effects of said law, and avoid breaking up trains, passenger-train cars are constantly being removed from passenger trains of more than 14 cars, and placed in shorter trains at terminals near Arizona, and at terminals farther removed, whenever and wherever such shifting may be accomplished with a minimum of interruption to traffic.

(b) The limitations fixed by said Train-Limit Law interfere with the movement of passenger-train equipment of all kinds, and particularly with the movement of empty equipment, which, on account of seasonal fluctuations in traffic, must at times be moved in one direction and at other times in the opposite direction. Such equipment could readily be handled on regular passenger trains, without interfering in any way with their ordinary operations, or with the safety or comfort of the passengers or the employees, if it were not for the law.

In addition to the passenger traffic carried on regular trains, which fluctuates greatly from day to day, in many cases special trains for or from Pacific Coast points, or for tours involving movement upon defendant's lines across Arizona, are chartered by parties, too large to be accommodated adequately in trains of 14 cars or less, which said parties desire for social or business reasons to travel together. They can travel by defendant's Arizona lines only if willing to be subjected to the inconvenience of having a part of the party handled in a second train, or having one or more baggage or other cars not actually occupied by them hauled in some other train, while in Arizona. In consequence, defendant is placed at a disadvantage in soliciting and handling such business in competition with other lines running to and from the Pacific Coast, north of Arizona; and the parties who travel via defendant's lines are subjected to inconvenience, delay, and interference while on their trips within and/or across Arizona.

[fol. 22] Solely as a result of said Train-Limit Law, defendant is forced to run numerous extra trains, involving substantial additional expense, not only for the operation of such extra trains themselves, but also in returning the extra crews and extra engines from the destination points of the extra trains to their home terminals, and of sending the extra engines and extra crews from their home terminals to the points where the extra trains originate.

(c) Detailed cost studies made by defendant show that the financial burden to which it is subjected by reason of the effect of the Train-Limit Law upon its passenger-train operations, in the territory between Los Angeles, California, and El Paso, Texas, amounts to more than \$10,000.00 each year, which figure relates to passenger operations in said territory only, and does not include any additional expense imposed upon and incurred by reason of the limitations of the law upon the lengths of freight trains. Moreover, compliance with the law requires defendant to operate a substantial number of extra trains within and across the State of Arizona, and in adjacent and contiguous territory where the Train-Limit Law operates with extraterritorial effect; and solely by reason of said law much equipment is required to be held out and forwarded on following trains, defendant is greatly handicapped in the operation of its passenger trains and in the solicitation of its passenger traffic, and is subjected to delay and interference, both within and outside of Arizona, by reason of the necessity of shifting cars from train to train in connection with the splitting up, in compliance with said law, of trains destined to points within or beyond Arizona, and the consolidation of trains after leaving Arizona so as to reduce the increased expenses caused by the Arizona Law as soon as practicable; and said expenses are and will continue to be irreparable, substantial, and of constant occurrence, and are and would be wholly unnecessary if it were not for the law; and all [fol. 23] of said additional unnecessary expenses could and would be saved and avoided, if defendant were to operate its trains without regard to said law, and in accordance with the standard methods of operation presently being followed elsewhere than in Arizona and the aforesaid adjacent territory, both on defendant's lines and on the lines of other railroad carriers with which it connects and competes.

5. *The law not a reasonable safety measure.*

Said Train-Limit law is arbitrary and unreasonable, and bears no reasonable relation to the health, comfort or safety of persons or the safety of property, and does not operate to promote the health or safety of employes, or passengers, or of the public otherwise. To the contrary, said law creates certain hazards which would not exist, except for the law, and increases other hazards of railroad operation. Said law is wholly unjustified as a supposed regulation by the State of Arizona in the purported interest of the health and safety of persons or property; it takes the defendant's property without due process of law, in violation of the Fourteenth Amendment to the Constitution of the United States and Section 4 of Article II of the Constitution of the State of Arizona, for the following reasons among others;

(a) Said Train-Limit Law is permissible and sustainable, if at all, only under the reserved police power of the State.

(b) Daily, defendant has tendered and delivered to it a large volume of freight, and a large number of passengers, for transportation as a common carrier in interstate commerce and in Arizona intrastate commerce. Its obligation as a common carrier is to receive, transport, and deliver such freight and passengers with all practicable safety, expedition and economy, and to furnish to shippers at receiving points on its lines a supply of empty cars, and to passengers who offer themselves for transportation a supply of accommodations, suitable and adequate for their needs.

[fol. 24] Those obligations defendant performs to the best of its ability; and in so doing it is necessary for it to operate, and it frequently and as a standard practice does operate, over its lines (except within Arizona and the adjacent territory where the Arizona Law has extraterritorial effect) freight trains of substantially more than 70 cars, exclusive of caboose, and passenger trains of more than 14 cars. Practically all of its freight trains carry interstate freight to a substantial extent; many of them almost entirely. Practically all its passenger trains carry interstate passengers, and mail, baggage, and express moving in interstate commerce. Such long-train methods of operation are not only more economical and more expeditious, as

heretofore alleged, but are also substantially safer than the methods of handling freight and passenger traffic, in Arizona and adjacent territory, which are compelled by the terms of the Arizona Law.

(c) On defendant's lines in Arizona, as well as on all steam railroads, the frequency of accidents to trains and of resulting casualties to those who are exposed to the hazards of train operation, including employes and members of the public not riding upon such trains, and employes and passengers on passenger trains, is directly related to the number of train units operated; and when more train units are operated than are necessary to handle a given amount of traffic, all hazards incident to the handling of that traffic are correspondingly increased. As heretofore alleged, the effect of said Train-Limit Law is proximately and directly to cause defendant to operate in Arizona and in the adjacent contiguous territory heretofore mentioned many more freight and passenger-train units than it would operate if it were not for said law, and therefore correspondingly to increase the hazards of defendant's train operations in Arizona and said affected contiguous territory.

(d) There is no hazard of freight-train operation, either [fol. 25] generally or as conducted by defendant, that can reasonably be said to be related to the number of cars in a freight train, or that can be or is removed or minimized or measurably reduced, by limiting freight trains in Arizona or elsewhere to 70 freight or other cars, exclusive of caboose. There is no hazard of passenger-train operation, either generally or as conducted by defendant, that can reasonably be said to be related to the number of cars in a passenger train, or that can be or is removed or minimized or measurably reduced, by limiting passenger trains in Arizona or elsewhere to 14 cars.

To the contrary, there are certain distinct and well-known hazards in train operation that are productive of accidents and casualties, and injuries to persons and damage to property, and that are definitely related to and increase with the number of train units operated, viz.:

(1) head-end and rear-end collisions of trains, with each other and with other vehicles using the same track;

(2) grade-crossing accidents, the hazard of which to a given number of users of a crossing is directly proportional to the number of trains run;

(3) casualties due to additional meets and passings of trains, in connection with which employes must go on top of trains and also leave and board them to open or after closing switches, and for other purposes made necessary by the meet or pass. The number of meets and passings does not vary in proportion to the trains run, but more nearly in proportion to the square of the number of trains run;

(4) accidents in yards, which are related to the number of trains made up or broken up in the yards;

(5) accidents due to defects in or failures of locomotives, the hazard of which ratably increases with the number of locomotives in actual service.

[fol. 26] (e) There is, moreover, a large class of hazards in all train operations, which produce accidents and casualties and which are directly related to and increase with the operation of an unnecessary and additional number of trains and the consequent employment and service of a correspondingly additional number of train-men and engine-men to man those additional trains.

More than half of the accidents and casualties that occur in the operation of steam railroads in Arizona and elsewhere are caused by the negligence of, disobedience of rules by, or inadvertence of employes. To require defendant to operate more trains than are reasonably necessary to handle the traffic offered to it will inevitably be to increase the hazard to the public, to employes, and to property, by increasing the number of opportunities for individual negligence, disobedience of rules and inadvertence by the employes handling such traffic. Further, by increasing the number of employes necessary to handle a given amount of traffic, the number of individuals who are subject to the hazard of injury in the handling of that traffic is thereby correspondingly increased.

(f) It is not reasonably necessary to limit freight trains to 70 freight or other cars, exclusive of caboose, or passenger trains to 14 cars, in order to prevent or reduce accidents due to defects in or failure of equipment of any class. No

accident from these causes has occurred on defendant's freight trains of more than 70 cars in length, exclusive of caboose, or on defendant's passenger trains of more than 14 cars, of which it can reasonably be said that the same accident would not, or probably would not, have occurred if the train had been of the length permitted by the Arizona Law, or even substantially shorter. Defects in and failures of locomotives are solely related to the individual locomotive; and defects in and failures of cars are related to the number of cars run, and not to the trains into which they [fol. 27] are divided.

(g) There is no reason or basis for any claim that for reasons of safety or for any other reasons freight trains in Arizona should be limited to 70 freight or other cars, exclusive of caboose, or passenger trains to 14 cars; the Arizona Train-Limit Law does not and will not only not decrease whatever general or special hazard there is existent and inherent in defendant's freight and passenger-train operations in Arizona, but does and will, to the contrary, materially impair and substantially lessen the safety of defendant's freight and passenger-train operations in Arizona, by creating certain individual hazards which would not otherwise exist, and by increasing other hazards inherent in train operation as hereinbefore described.

6 Defendant's traffic across Arizona preponderantly interstate.

Substantially all of the freight and passenger traffic transported on defendant's main lines across the State of Arizona consists of interstate traffic, by far the greater part of which either originates in the State of California and is destined to points east of the Rocky Mountains, or originates at points east of the Rocky Mountains and is destined to California points, and is commonly known as transcontinental traffic. A large part of the remainder of such interstate traffic consists of traffic moving to or from the State of Arizona.

A substantial portion of the traffic originating in California, as well as in Arizona, and destined to points east of Arizona consists of perishable freight (i. e., fruits and vegetables) which are required to be transported in as large train units as practicable, so as not to delay their receipt in eastern markets, where prices constantly fluctu-

ate, and so as to prevent loss of value by decay and deterioration.

The traffic handled upon defendant's lines extending [fol. 28] across the States of Nevada and Utah likewise consists almost entirely of interstate traffic, and principally of transcontinental traffic as above defined; and in large part of perishable products, moving from the States of California and Oregon to eastern destinations, and of traffic moving to the Pacific Coast states; and in many respects is thus closely similar to the traffic carried upon defendant's lines across the State of Arizona.

The Arizona Train-Limit Law, by preventing the proper and expeditious handling of the aforesaid interstate traffic from, to and across the State of Arizona, by limiting the lengths of the train units in which it may be handled, thereby unnecessarily and unreasonably burdens, delays, and interferes with the interstate commerce in which it moves.

The traffic on the interstate passenger trains operated by defendant upon its lines across the State of Arizona consists, almost in its entirety, of passengers, baggage, and express moving from one state to another; moreover, practically all of said interstate passenger trains carry United States mail. The inevitable effect of said Arizona Law is frequently to delay such interstate passenger trains, as they enter or are about to enter, or are leaving or about to leave, or are in transit across the State of Arizona, and thereby unreasonably and unnecessarily to burden, delay, and interfere with the interstate commerce carried on by means of said trains.

7. The subject of train limitation one of national concern.

The permissible number of cars in an interstate train is a subject of national, and not local, concern, and one which, if any regulation at all is to be required, should be regulated by the Federal Government and not by the individual states, in that it is wholly impracticable to move railroad terminals to state lines, or to split or consolidate through trains except at terminals; and at some terminals freight [fol. 29] trains containing perishable freight cannot be delayed for purposes of splitting up or consolidation. If other states should regulate train lengths in accordance with their several notions as to what would be proper within

their respective boundaries, all such regulations necessarily would have wide extraterritorial effect, as does the Arizona Law, and to comply with their conflicting provisions would seriously embarrass through interstate train operations.

8. The law impairs the usefulness of defendant's facilities.

The necessary effect and operation of said Train-Limit Law is directly, substantially, and continuously to impair the use and usefulness of the facilities used and usable by the defendant, in the carriage of interstate commerce across, into, through, and out of, the State of Arizona.

9. The law inposes direct burdens upon interstate commerce.

The additional and unnecessary expense of interstate freight train and interstate passenger train operation, more fully set forth heretofore, to which defendant is subjected as hereinbefore alleged, and which defendant could avoid if it were not for said Train-Limit Law, is a substantial and direct burden upon the interstate commerce carried on by defendant into, out of, across and through the State of Arizona by means of its said interstate trains.

10. The Train-Limit Law violates the Commerce Clause of the Federal Constitution.

Said Train-Limit Law is unconstitutional and void, as to each and all of the interstate trains of the defendant, in that it conflicts with and violates the Commerce Clause (Paragraph 3 of Section 8, Article I) of the Constitution of the United States; because:

[fol. 30] (a) The permissible number of cars in an interstate railroad train passing from one state to another, or passing from one state through another into a third, or passing through a number of states, is a subject over which exclusive legislative jurisdiction was and is vested in Congress by said Commerce Clause;

(b) The necessary effect of said law is: (1) to impose a direct and substantial burden upon, and directly and substantially to interfere with, delay, and regulate, the operation of defendant's interstate freight and passenger trains across and within Arizona, as well as in California and New

Mexico; (2) to determine the number of interstate trains to be run by defendant, not only within Arizona, but also within adjoining portions of California and New Mexico; and (3) to impair the usefulness of the facilities used, as well as those usable, by the defendant in the carriage of interstate commerce across, through, into, and out of, the State of Arizona.

11. The Train-Limit Law violates the Due-Process Clauses of the Fourteenth Amendment to the Federal Constitution and Article II, Section 4, of the State Constitution.

Said Train-Limit Law is further unconstitutional and void, and in violation of the aforesaid Commerce Clause of the Constitution, and also operates unreasonably and arbitrarily to deprive defendant of its property without due process of law, in violation of the Due-Process Clause of the Fourteenth Amendment to the Constitution of the United States, and the Due-Process Clause set forth in Section 4 of Article II of the Constitution of the State of Arizona, because:

(a) It fixes maximum train lengths very much lower than those which generally obtain elsewhere throughout the United States, under operating conditions substantially the same as those on defendant's main lines in Arizona;

(b) It makes no allowance for grade or other operating [fol. 31] conditions, or for the construction, type, weight, or length of the cars composing the train, or whether such trains are loaded or empty, and if loaded the weight of the load;

(c) It imposes a great and substantial burden of expense upon, interference with, and delay to, interstate commerce and impairs the usefulness of defendant's transportation facilities; and

(d) It bears no reasonable relation to health or safety.

12. The Train-Limit Law conflicts with Federal legislation.

Said Train-Limit Law is further void, invalid, and unenforceable, for the reason that it is in conflict with, and/or an infringement upon, legislation heretofore enacted by

Congress, pursuant to its powers under the Commerce Clause of the Constitution, in the following respects:

(a) To the extent that said Train-Limit Law is or may be intended to prevent the use of heavy locomotives in the State of Arizona, and thus to regulate locomotive sizes, it is an infringement upon and in conflict with statutes enacted by Congress pursuant thereto, having the same or a like purpose, to wit, the Boiler Inspection Act of February 17, 1911 (36 Stat. 913), as amended in 1915 (38 Stat. 1192), and in 1924 (43 Stat. 659), being Sections 23 to 35, inclusive, of Title 45 of the United States Code, wherein and whereby full power over the size, design, weight or construction of locomotives was delegated to and is now vested in the Interstate Commerce Commission;

(b) To the extent to which said Train-Limit Law is intended to or has or may have the effect of limiting the number of cars in a freight or passenger train to the maximum number which properly and with reasonable safety can be controlled in one train by the type of air brakes and their appurtenances now used on such trains, or by any other [fol. 32] form of train-control devices or other safety devices, it is void, in that it attempts to and does enter a legislative field already entered and therefore completely occupied by Congress: the Congress having, under the Commerce Clause, by the enactment of the power-brake provisions of the Safety Appliance Act, as amended (Sections 1 and 9 of Chapter 1 of Title 45 of the United States Code), and the provisions of Section 26 of the Interstate Commerce Act (Section 26 of Chapter 1 of Title 49, of the United States Code), delegated to the Interstate Commerce Commission full and complete authority to investigate and determine the adequacy of the air-brakes, and their appurtenances, and other forms of train-control and other safety devices, used or proposed to be used upon locomotives and cars operated in interstate commerce, and by order to prescribe the form and type of such air-brakes, appurtenances and other train-control and safety devices, and from time to time to issue such amendatory and supplementary orders as it may deem necessary or desirable in the exercise of the power and jurisdiction thus conferred by Congress; and the Congress having, in particular, in and by said statutes, necessarily empowered said Interstate Commerce Commission to determine whether the types of air-brakes, and their appurte-

nances, presently used or proposed to be used upon trains in interstate commerce, are or will be adequate and effective, safely and properly to control and to stop trains of the lengths now being operated in interstate commerce, both in the State of Arizona and elsewhere, by the defendant and by other railroad common carriers throughout the United States.

13. The Train-Limit Law prevents efficient operation.

If it were not for said Train-Limit Law, defendant could and would at once begin and hereafter continue to operate a substantial number of its freight and passenger trains into, within, through and across Arizona, without regard to {fol. 33} the restrictions and limitations imposed by said law; and would thereby and thereupon at once begin and thereafter continue to effect the increased economy and efficiency and the greater safety of operation which, as heretofore set forth in detail, are and would be attendant upon and caused by such operation.

14. Extent and cumulative character of penalties for violation of Train-Limit Law.

In handling the interstate freight traffic moving over its lines across the State of Arizona, defendant operates daily in each direction between its freight terminals at Yuma, Arizona, and Gila, Arizona, and between its freight terminals at Gila and Tucson, Arizona, and between its freight terminals at Tucson and Lordsburg, New Mexico, a substantial number of through interstate freight trains, all of which move over the line heretofore described as the Yuma-Maricopa-Lordsburg Line. The number of such trains so operated each day varies according to the demands of traffic and ranges from approximately 75 trains per month on the average, in each direction between Yuma and Gila, and 75 trains per month in each direction between Gila and Tucson, and 90 trains per month in each direction between Tucson and Lordsburg, during the month of November, to 180 trains per month in each direction between Yuma and Gila, and 180 trains per month in each direction between Gila and Tucson, and 200 trains per month in each direction between Tucson and Lordsburg, during the month of June; which said months of November and June represent the months during

the year when such interstate traffic across Arizona is lightest and heaviest, respectively.

If defendant were to disregard entirely the provisions of the Arizona Train-Limit Law, and were to attempt to operate each of its aforesaid freight trains within or across the State of Arizona with more than 70 cars each, exclusive of caboose, it would thereby become subject to prosecutions for [fol. 34] the recovery of the severe penalties provided by Section 3 of said Train-Limit Law. Defendant would thus become liable for penalties, in the event such prosecutions should be instituted, as directed and required by said Section 3, which, in the event said law should be sustained in said prosecutions, would range, on the average, from \$1,600.00 to \$16,000.00 per day during the period of lightest traffic, and from \$3,700.00 to \$37,000.00 per day during the period of heaviest traffic; and said penalties would be and will be cumulative, and may or might be recovered in a single prosecution or in a series of prosecutions instituted for that purpose, unless said law be held invalid and unconstitutional as herein alleged. Said penalties would be additional to any penalties which might be incurred by the operation of freight trains of more than 70 cars, exclusive of caboose, upon the Wellton-Phoenix-Picacho or Tucson-Douglas main lines, heretofore described, or upon any of the branch lines in Arizona, or of passenger trains of more than 14 cars upon any part of the defendant's lines in Arizona.

If, on the other hand, defendant should continue to comply with said law, and should continue to operate all of its freight trains upon its lines within the State of Arizona, and the adjacent districts in which the law now has extra-territorial effect, with not more than 70 freight or other cars, exclusive of caboose, and were to continue to operate all of its passenger trains within Arizona and said adjacent districts with not more than 14 cars each, the added expense thus imposed upon defendant, solely as the result of said compliance, would be and will continue to be, as heretofore more fully alleged, not less than \$300,000 per year, or, on the average, not less than approximately \$822.00 per day, all of which such added expense is and will be continuous and irreparable.

[fol. 35] [15. Defendant has no adequate remedy at law.]

Defendant, as a citizen and resident of the State of Kentucky, and irrespective of its residence and citizenship in a

state other than the State of Arizona, has no plain, speedy or adequate remedy at law for the protection and preservation of its constitutional and statutory right and immunities hereinbefore set forth, afforded or available to it in this or any other court in the State of Arizona, or in any other jurisdiction, or in any court of the United States of America.] Stricken by Judge Hall, June 25, 1940.

IV

For a second, separate and affirmative defense to said complaint, and to each and both of the alleged causes of action therein set forth, defendant further alleges and shows:

1. On April 18, 1939, this defendant commenced in the District Court of the United States in and for the District of Arizona a suit for declaratory judgment, by filing a verified complaint in which this defendant was named as plaintiff, and Joe Conway, identified in said complaint as the Attorney General of Arizona, was named as defendant. Said suit is known and numbered as No. Civil 31-Phoenix upon the records of said United States District Court. The defendant therein, said Joe Conway, was and is the same person who presently occupies the office of Attorney General of Arizona, and who, acting under color of that office, has filed and signed the complaint herein as relator. The purpose of said suit was to obtain a declaratory judgment and decree establishing the unconstitutionality and invalidity of the Arizona Train-Limit Law; and in and as part of its, said complaint therein this defendant, as plaintiff, presented allegations with respect to said law, its effects upon defendant's operation, and its resulting invalidity, which were substantially identical to and in substantially the same wording as those which appear and are set forth in paragraphs 1 to 15, inclusive, of its first, separate and affirmative [fol. 36] defense herein.

2. After various proceedings, which included in particular a due trial and determination of all the facts, said United States District Court on February 14, 1940, duly made and entered its findings of fact and conclusions of law in said suit, wherein and whereby it determined and declared, among other things, that each and all of the allegations of certain paragraphs of the complaint of the plaintiff in said

cause had been admitted and conceded by said Conway, as defendant therein, to be true and correct, and were therefore found to be true and correct. The paragraphs of said complaint, the allegations of which were thus adopted and found to be true by said United States District Court, included all those portions of the complaint before said Court which correspond and, as aforesaid, are substantially identical to and are in effect reproduced in said paragraphs 1 to 15, inclusive, of the first, separate and affirmative defense herein.

3. In and by its said findings said United States District Court in particular found and determined that said Arizona Train-Limit Law was and is wholly void, invalid, unconstitutional and unenforceable as to this defendant, plaintiff in said suit, and each and all of its interstate trains.

4. Said United States District Court, on said February 14, 1940, also rendered its judgment and decree in the aforesaid suit, No. Civil 31-Phoenix, wherein and whereby, inasmuch as it appeared to said Court that the parties to said cause were not in disagreement upon any of the essential issues of law or fact therein, except the question whether an actual controversy was shown to exist, and the Court having concluded that no actual controversy was presented, the case was ordered to be dismissed.

5. An appeal from said judgment of said District Court was duly taken by this defendant, as plaintiff and appellant, [fol. 37] to the United States Circuit Court of Appeals for the Ninth Circuit; and said cause is now pending upon appeal in said Circuit Court of Appeals.

6. Said relator has never undertaken, either as defendant in the aforesaid suit in the United States District Court or otherwise, to challenge or dispute the correctness of any material portion of the findings of fact made by said District Court in said suit.

V

For a third, separate and affirmative defense to said complaint herein, and to each and both of the alleged causes of action therein set forth, defendant further alleges and shows:

1. Joe Conway, who as the relator named in said complaint has signed, filed, and presented the same, has been

at all times herein mentioned since January 1, 1938, and now is, the duly elected, qualified and acting Attorney General of Arizona.

2. Said relator, as defendant in the aforesaid suit, No. Civil 31-Phoenix, in the United States District Court for Arizona, on November 3, 1939, in open court expressly admitted that said Train-Limit Law was and is wholly void, invalid, unconstitutional and unenforceable as to this defendant and each and all of its interstate trains, because in conflict with and an infringement upon certain specified provisions of the Constitution of the United States, to wit, the Commerce Clause (Article I, Section 8, paragraph 3) and the Due-Process Clause of the Fourteenth Amendment thereof, and also certain Acts of Congress.

3. This defendant, as a party to said suit, was then and there caused and induced to believe in and to rely upon the truth and sincerity of relator's said admissions; and at all times subsequent to the making thereof did truly believe and rely upon the same; that is to say, defendant was induced to and did truly believe and rely upon relator's said admissions [fol. 38] as showing that said relator, Joe Conway, then was and would continue to be truly and sincerely persuaded and convinced (1) that said Train-Limit Law was and is wholly invalid and unconstitutional for each and all of the reasons aforesaid, and (2) that consequently no power or duty of prosecution for the violation or any violation thereof was thereby imposed upon or vested in him or possible of exercise by him, and (3) that he, said relator, having in mind his official oath of office as Attorney General, might therefore rightfully refrain from effort to enforce said law.

4. In having caused or permitted the operation of both and each of the trains specifically referred to in the complaint herein, said defendant was induced so to do, and did so, solely by reason of its aforesaid belief in and reliance upon the truth and sincerity of relator's said express admissions, and not otherwise.

Wherefore, defendant respectfully prays this Court to find and conclude, and to render and enter judgment in favor of defendant and against the plaintiff adjudging and declaring:

(1) That said defendant has not wilfully violated said Arizona Train-Limit Law, either at the times or in the manner in said complaint alleged, or otherwise, or at all;

(2) That said Arizona Train-Limit Law is wholly void, invalid, unconstitutional and unenforceable as to the defendant, and each and all of the defendant's railroad operations, both within and without the State of Arizona, upon each and all of the grounds hereinbefore set forth;

(3) That defendant is not liable to the plaintiff, either by reason of the circumstances alleged in said complaint or in either of the purported causes of action therein set forth, or otherwise, in either the amounts specified in said complaint, or in any other sum or amount;

(4) That plaintiff take nothing by its action;

[fol. 39] (5) That the complaint and each count thereof be dismissed;

(6) That defendant do have and recover its costs of suit herein incurred;

(7) That defendant have such other and further relief as may be proper.

Alexander B. Baker, Louis B. Whitney, 703 Luhrs Tower, Phoenix, Arizona; Cleon T. Knapp, Jas. P. Boyle, B. G. Thompson, 913 Valley National Bldg., Tucson, Arizona, Attorneys for Defendant.

C. W. Durbrow, Henley C. Booth, Burton Mason, 65 Market Street, San Francisco, California, of Counsel.

Due service of the within & foregoing answer admitted this 8th day of May, 1940.

Joe Conway, Charles L. Strouss, W. E. Polley, Attorneys for Plaintiff.

[File endorsement omitted.]

[fol. a] IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
IN AND FOR THE COUNTY OF PIMA

No. 20087

STATE OF ARIZONA, ex rel. Joe Conway, Attorney General
of the State of Arizona, Plaintiff,

vs.

SOUTHERN PACIFIC COMPANY, a corporation, Defendant

STATEMENT OF EVIDENCE—Filed April 8, 1942

Before the Honorable Levi S. Udall, Presiding

Tucson, Ariz., November 19, 1940.

Transcript of Testimony

APPEARANCES:

For the Plaintiff: Mr. Charles L. Strouss, Mr. W. E. Polley.

For the Defendant: Mr. Burton Mason, Mr. Henley C. Booth.

[fol. 1] COLLOQUY

The Court: Are the parties ready to proceed?

Mr. Polley: The State is ready.

The Court: Is the defendant ready?

Mr. Mason: Ready for the defense.

The Court: You may proceed.

Mr. Polley: If the Court please, in view of the fact that the pleadings raise a peculiar issue we will ask permission to read the complaint.

The Court: Fine, go right ahead.

(Thereupon the complaint was read to the Court by counsel).

The Court: In other words, the first cause of action has to do with the alleged unlawful operation of a freight train and the second cause of action alleges the operation of a passenger train in excess of the number of cars allowed by statute.

Mr. Polley: That is correct. I presume counsel wants to read the answer.

Mr. Mason: Your Honor, we do not desire to read the answer at length. The answer consists of some 33 pages of typewriting, each of them of 32 lines and it would take a great deal of the time of the Court. We assume that the Court has read or at least scanned over the answer.

The Court: No, I haven't; I have never seen the file [fol. 2] until this morning.

Mr. Mason: Then I will make a brief statement as to the contents of the answer and outline what is therein set forth as our defense.

The Court: I wish you would.

Mr. Mason: I should say first of all, that the answer was filed within the time required for pleading and thereupon and shortly after it was filed a motion to strike and a motion for summary judgment was filed by the plaintiff. The motion to strike was allowed as to one particular of the answer which I shall refer to later, and the motion for summary judgment was overruled. In other particulars, the motion to strike was likewise overruled by Judge Hall.

The answer, first of all, is in five separate subdivisions. The first subdivision is a direct answer to the allegations of the first cause of action. It admits the enactment of the statute, and admits likewise that a train was operated on April 4th consisting of more than 70 cars, and that it was operated at the time and from the point of origin mentioned in the first cause of action. Alleges that it was operated in interstate commerce and consisted in large part, if not entirely, of cars moving in interstate commerce and carrying [fol. 3] ing interstate traffic; denies that the operation or permission or the allowance of the operation of the train was wilful or that the statute was wilfully violated, and denies that the defendant has wilfully operated this or any other train in the manner alleged in the first cause of action, and denies liability.

The second portion of the answer is similarly addressed to the second cause of action and admits that the passenger train was operated at the time specified and on the same date, and that it likewise consisted in large part of cars moving in interstate commerce and carrying interstate traffic, and denies any wilful violation and denies liability.

The third subdivision of the answer is the first separate and affirmative defense and it consists of that portion of the complaint commencing on the eighth line of Page 3 and continuing to and including line nine on Page 29. However, the last paragraph of the third portion of the complaint, being Paragraph 15 of that portion, which is a short paragraph found on Page 29 was stricken by Judge Hall and I need not refer to it except to say it is no longer a part of the answer. It is Paragraph 15 commencing on [fol. 4] Line 1 and concluding on Line 9 of Page 29 of the answer.

The Court: Just nine lines were stricken?

Mr. Mason: Yes, one complete paragraph. It will come better in consecutive order to mention what it was.

The Court: Go ahead.

Mr. Mason: The first affirmative defense, part III of the answer, consists of fourteen paragraphs. The first paragraph simply describes the status of the defendant as an interstate common carrier, operating lines in interstate commerce in seven western states, including Arizona and the adjacent states and engaged in the transportation of persons and property and as such subject to the Interstate Commerce Act and acts relating thereto and amendatory thereof, the Federal Act of February 4, 1887, and other acts of Congress related to that act.

The second paragraph, 2, of Part III of the answer describes the defendant's railroad system in some detail and particularly the Arizona lines. It describes the lines as extending from San Francisco to Portland, from San Francisco to Ogden, from San Francisco via Los Angeles, Yuma, Tucson to El Paso and thence to Tucumcari, New Mexico, the connection of the defendant at various points [fol. 5] with other interstate railroad companies, and thus the fact that the defendant is a part of the general national transportation system and engaged in the handling with its connections of freight and passengers between all portions of the United States and to and from adjacent foreign countries.

Then it describes particularly the lines across Arizona. As your Honor knows, there is a main line extending from Yuma to Wellton, thence via Gila and Maricopa, Picacho to Tucson; thence eastward to Benson, Willcox, Lordsburg, New Mexico, and so to El Paso, Texas. There is an alter-

nate main line commencing at Wellton, running northeast to Hassayampa, Phoenix, thence southeast to a connection with the other main line, the one first described, at Picacho. From Tucson to Mescal there are alternate lines. At Mescal there is a line that diverges from the line first described and runs southeast to Bisbee Junction, Naco, Douglas and into New Mexico at a point west of Rodeo and thence along near the international boundary line to El Paso. The answer describes and alleges that the principal freight traffic carried between points west and east of Arizona by this system across Arizona is handled over the main line through Gila, Maricopa, Tucson and Lordsburg, but that a substantial portion of the traffic is likewise handled over [fol. 6] the line through Phoenix and likewise over the line through Douglas.

Passenger traffic, on the other hand, is handled by all of these different lines, and I may say that a major proportion of the traffic between Tucson and Yuma passes through Gila, but as between Tucson and El Paso the traffic is divided more nearly evenly.

This paragraph continues to state that the lines that cross Arizona and New Mexico are on comparatively light grades and run through much level territory. They are well constructed, according to the best modern railroad standards and capable of sustaining the heaviest and most powerful locomotives operated by defendant. They are likewise equipped with automatic block signals and numerous other devices conducive to safety of operation. The operating conditions upon the main lines, across Nevada and Utah, are in general quite similar to those encountered across Arizona and New Mexico, and the lines across those two states are likewise well constructed and equipped throughout with automatic block signals and other safety devices.

Paragraph 3 of part 3 of the answer describes the effect of the train limit law upon the defendant's train operations [fol. 7] and particularly freight train operations. It is a very lengthy paragraph and even to summarize it will take some time, but it proceeds to state that the operating conditions, both on the lines of railroad in Arizona and elsewhere and throughout the United States generally have vastly improved since 1912 when this law was enacted. Great improvements have been made in equipment, as well

as in roadbed. These consisted, of course, ~~in the~~ strengthening and increase of the weight and power of locomotives, installation of many devices conducive to greater safety and greater strength, and as to fixed equipment, roadbed, bridges and so forth have been strengthened and replacements of rail made up to the present time,—that these improvements have been made largely for the purpose of increasing the length and loading of trains so as to bring about a more efficient and economical operation. Then it is likewise alleged that the same conditions which prevail generally throughout the United States as to improvement of roadbed and equipment have likewise been made in Arizona; that the defendant has spent considerable sums of money in Arizona in the improvement of its track and roadbed, as well as in the building of the new line through [fol. 8] Phoenix. That the track and roadbed in Arizona are capable of handling and supporting the heaviest locomotives owned by defendant and that there is no reason from the standpoint of climatic conditions, or track, roadbed, curvature, grades or otherwise, why defendant could not at once commence the operation on its main lines in this state and in the adjacent states of California and New Mexico where the train limit law operates to restrict the length of trains, of a very substantial number of freight train units of substantially more than 70 freight or other cars, and passenger train units of substantially more than 14 passenger cars, and thus bring about safer and more economical operation on those particular lines. The paragraph continues to describe that prior to 1912 and at that time freight trains of more than 70 cars were operated only under particular conditions, mostly on favorable grades or consisted in whole or large part of empty cars, but by reason of the improvements made since that time, the operation of long freight trains, by which term I mean trains consisting of more than 70 cars, and I shall use that term instead of the longer term from now on, and long passenger trains will be used to mean more than 14 cars, that the operation of long freight and passenger trains [fol. 9] has become and now is the common method and standard method of operation in the United States, except in Arizona and the adjacent territory where the train limit law operates with extra-territorial effects; that except in Arizona and adjacent territory freight is now transported

in such long trains on improved schedules which are very much better than they were prior to 1924 and that by such long train operation with resulting economy and greater efficiency and greater speed, the nation-wide distribution of perishable products of Arizona and California has been made possible; that car shortages have been practically eliminated by reason of long train operation and its resulting greater efficiency and economy with beneficial effects upon the necessity of those depending upon railroad transportation to maintain larger stocks of merchandise, they are no longer required to do so because they can depend upon fast and timely delivery of the merchandise that they require.

There is a further allegation that the practise of standard long train operation as carried on by the defendant and its principal competitors does not delay or retard the delivery of goods, but on the contrary expedites such movement, [fol. 10] and that such trains, particularly freight trains but not omitting the mention of passenger trains as well, are commonly, safely, and economically operated throughout the United States outside of Arizona over lines of railroads substantially similar to the main lines of the defendant in Arizona, and that there is no reason, from the standpoint of safety or otherwise, why the length of defendant's freight trains in this state should be limited as required by the train limit law.

The paragraph follows to allege the circumstances under which the train limit operates with extra-territorial effect, showing the impossibility of constructing terminals at which trains may be broken up exactly at state boundaries and the fact that the principal traffic carried, particularly the perishable traffic moving east of Arizona forbids its being held at boundary line points in order that the length of the train may be reconstituted. The result is, therefore, that the trains consisting of perishables, particularly, must be made up in Arizona sizes at points west of Arizona and run through Arizona in order to meet the restrictions of the law to a point east of Arizona where they may be economically reconstituted into the lengths suitable to normal operation and on the eastward, the first [fol. 11] point at which reconstitution can normally take place in the case of perishable trains is at El Paso, Texas, so that the inevitable effect as alleged here is that the train

limit law certainly operates extra-territorially as far as Lordsburg and generally as far as El Paso, 166 miles from Arizona, and on the west it operates extra-territorially to some extent as far west as Indio, California, some 120 miles west of Yuma.

The answer continues with paragraph 3 of part 3, alleges further that the average and maximum length of trains in Arizona by reason of the law are very much less than adjacent states or other states in which the defendant operates, the result therefore being that in order to handle the same absolute volume of traffic whether measured in number of cars handled or in the number of car-miles produced, a greater number of trains is required to be operated or a greater number of train-miles required to be made, with resulting increase in cost; and it is shown that the increased cost due to the number of train and locomotive miles imposed upon the defendant by the necessity of operating these greater number of train units, amounts to not less than \$300,000.00 a year, considering only the effect on freight train operations on the direct main line between [fol. 12] Yuma via Gila and Maricopa, Tucson and Lordsburg to El Paso and not considering whatever additional expense may be imposed by reason of the restriction of the law on trains operated over the Phoenix line or the south line through Douglas.

Then the paragraph goes on to allege: If it were not for the law this additional operating expense could be saved and substantial additional savings could be made with respect to operations of these other lines and by reason in the saving in passenger operation as well. The paragraph concludes with the general allegation that the effect of the law is to interfere with and delay interstate traffic being handled into, through or across Arizona, to interfere with freight traffic being handled on the line in California and New Mexico, thus emphasizing extraterritorial effect, to impose the increased burden of expense to which I have referred, and to increase the number of meetings and passings because of the multiplication of train units operated and the fact that they operate largely upon single track where trains must both meet and pass in order that the operation may be carried on.

Paragraph No. 4 of part 3 of the answer, describes the effect of the law upon passenger train operations particu-

[fol. 13] larly and indicates that there is a similar disturbing effect upon passenger train operation because of the requirement of not more than fourteen cars be operated in any one train. The interference is described in considerable detail, which I need not go into here. There is likewise shown an additional cost of not less than \$10,000 a year, some of which accrues because of extra-territorial interference.

Paragraph 5 of part 3 is the part which describes that the law is not a reasonable safety measure. It points out that it bears no reasonable relation to the health, comfort or safety of persons or the safety of property and does not operate to promote the health or safety of employees, or passengers or of the public otherwise. To the contrary, it creates certain hazards which would not exist except for the law and increases other hazards. It is alleged that the law is wholly unjustified as a regulation or supposed regulation by the state in the purported interest of the health and safety of persons or property and for that reason it takes defendant's property without due process of law in violation of the Fourteenth Amendment to the Constitution of the United States and Section 4 of Article II of the Constitution of the [fol. 14] State of Arizona. The paragraph points that the train limit law is permissible and sustainable, if at all, only under or solely as an expression of the police power of the State. That the defendant is required in its business as a common carrier to handle the freight and passengers which come to it to be transported with the greatest practicable safety; expedition and economy; that in doing so it is necessary to operate each train and it does so outside of Arizona in units greater than seventy or fourteen cars as the case may be; that all of these trains, or practically all of them, especially upon its main lines, carry interstate freight or passengers and some of them are entirely so composed. That the long train method of operation is not only more economical or expeditious but also much safer than the method of handling required in Arizona or adjacent territory because of the train limit law and its restrictions. Then it is pointed out that the number of casualties, the frequency of accidents to trains and of resulting casualties to those who are exposed to the hazards of train operation, including all classes, employees, passengers, those riding upon trains in neither classification, and the public generally, is directly related to the number of train units operated, and when [fol. 15] more train units are operated than are necessary

to handle a given amount of traffic, all hazards incident to the handling of that traffic are thereby greatly increased.

The paragraph further alleges there is no hazard of train operation either general or as such operations are conducted by defendant that can reasonably be said to be related to the number of cars contained in a freight train or that can be minimized or removed or substantially reduced by limiting freight trains to seventy cars as in Arizona. Equally there is no hazard of passenger train operation which can similarly be affected by reducing passenger train length to fourteen cars. On the contrary, there are certain well known and well recognized hazards of train operation which are increased by increasing the number of trains, which are among others the following: head and rear-end collisions; grade crossing accidents, the hazard of which to a given number of users of a particular crossing is directly in proportion to the number of trains run, that go across that crossing; casualties due to additional meets and passings in connection with which employees must go on top of trains or leave trains or board them while in motion for the purpose of opening or after closing switches and of course the number of meets and crossings does not vary in proportion to the number of trains run but more nearly in proportion to the square or the product of the number of trains run. Then there are yard accidents which are in direct proportion to the number of trains made up in the yard; accidents due to defects in or failure of our locomotives which are in direct proportion to the number of locomotives run or in actual service. The paragraph goes on to say that the large class of hazards in train operation which are due to employee negligence are directly increased according to the increase in the number of employees required and as more trains are required, more employees are required, and there are more opportunities for employee negligence; and employee negligence, according to statistics, accounts for more than fifty per cent and perhaps more of the casualties which occur in the operation of steam railway trains both in Arizona and elsewhere. By "employee negligence," I also mean outright disobedience of rules, as well as such cases of negligence as are not covered by rule violation. The paragraph concludes there is no basis for any claim that for reasons of safety or for any other reason, freight trains should be limited to seventy cars as in Arizona or passenger trains to fourteen cars and that

the Arizona law does not decrease whatever general or special hazards that exist or are inherent, but on the contrary materially impairs and substantially lessens the safety of defendant's freight and passenger train operations in Arizona and creates certain hazards which would not otherwise exist, as well as increasing other hazards inherent in train operations.

Paragraph 6 simply shows that the traffic handled on the main lines across Arizona and which are affected by the law consist preponderantly of interstate traffic originating beyond Arizona and moving across Arizona to points in other states, or originating in Mexico and moving across Arizona, or originating in Arizona and destined to points in other states, or originating outside of Arizona and destined here. A substantial part of the traffic consists of perishable products which are required to be transported in as large train units as practicable so as not to delay their receipt in eastern markets. Similarly, as to passenger train traffic it is preponderantly interstate.

Paragraph 7 alleges that the subject of train limitation is necessarily a subject of national and not local or state [fol. 18] concern, and if any regulation at all of train lengths is required it is to be undertaken by the Federal Government and not by any individual state.

Paragraph 8 simply alleges in a single sentence that the law impairs the usefulness of the defendant's facilities.

Paragraph 9 in a single sentence alleges that the law imposes direct burdens on interstate commerce.

Paragraph 10 alleges a violation of the Commerce clause of the Federal Constitution in that the permissible number of cars to be handled in an interstate train is a subject of National and not state concern and that the necessary effect of the law, as before alleged, is to impose burdens on Interstate Commerce, to interfere with and delay Interstate Commerce, to regulate the number of trains to be operated by the defendant as an interstate carrier not only in Arizona but also in California and New Mexico.

Paragraph 11 alleges a violation of the due process clause of the Fourteenth Amendment to the Federal Constitution and the corresponding and—I think—exactly similarly worded clause of Section 4 of Article II of the Constitution of the State, for the reason that the train limit law fixes [fol. 19] maximum lengths very much less than are customarily operated throughout the United States elsewhere

than Arizona; that the law makes no allowance for grade or other operating conditions or for the construction, height, weight or length of the cars composing the train, or whether the cars be loaded or empty, or what the weight of load may be; and because of the substantial burden of expense; and finally because the law bears no reasonable relation to health or safety.

Paragraph 12 alleges a conflict with federal legislation, an infringement upon the federal statutes, first because the train limit law, to the extent that it is intended or may be intended to prevent the use of heavy locomotives within Arizona regulates locomotive sizes and thus infringes with statutes enacted by Congress having that purpose, and secondly, to the extent to which the train limit law may be intended or may have the purpose or the effect of limiting the number of cars in a freight or passenger train to the maximum number which may be properly and with reasonable safety controlled by the device of airbrakes and their appurtenances now used on such trains or by any other form of train control device, it enters the legislative field occupied [fol. 20] by Congress; Congress having, under the Commerce Clause, by the enactment of the power brake provisions of the Safety Appliance Act, delegated to the Interstate Commerce Commission full and complete authority to investigate and determine the adequacy of the airbrakes and their appurtenances and by order to prescribe the form and type of such airbrakes and so forth, and from time to time to issue such orders as may be necessary in the premises.

Paragraph 13 alleges that the train limit law prevents efficient operation in that, if it were not for the law much more efficient and much safer operation could be conducted in Arizona at once.

Paragraph 14 alleges that the law would impose, if continuous violations were undertaken, extensive and cumulative penalties, and alleges the extent of the freight and passenger traffic. I believe it does not mention passenger traffic, but shows the number of freight trains handled by the defendant over the Yuma-Gila-Tucson-Lordsburg line.

Paragraph 15, as I said before, was stricken.

The Court: What page is that?

Mr. Mason: That is on page 29. It simply states that the defendant was without adequate remedy at law for its protection in this or any other court of the State of Arizona or

[fol. 21] elsewhere or in any court of the United States. The purpose of the paragraph was to establish this case or this defense as a defense equitable in nature, but since the paragraph has been stricken I only mention it for the purpose of showing it bears comparatively little importance to the fundamental issues of the case and probably would not be the subject of proof at all whether or not it remained in the answer.

That concludes all of the first of the affirmative defense. I need only refer very briefly to the second and third affirmative defenses; which are respectively parts 4 and 5 of the answer. Part 4 of the second affirmative defense refers mainly to the fact that a suit was brought against Mr. Conway who is the occupant of the office of Attorney General, in the United States District Court at Phoenix, and the purpose of the suit, which was to obtain a declaratory judgment, that the law was invalid and that Mr. Conway had no power to enforce the law.

The Court: Is that the action that was disposed of by the Circuit Court within this week?

Mr. Mason: Yes, that is right. The paragraph goes on to state that a trial was had and each and all of the allegations of certain paragraphs of the complaint, the factual [fol. 22] allegations were conceded by Mr. Conway as the defendant and that those paragraphs which he admitted in the federal suit were substantially identical to and in effect reproduced in paragraphs 1 to 15 of the first defense in this answer. Then it refers to the fact that the District Court made findings which reproduced the admissions of Mr. Conway, that a judgment and decree was entered dismissing this suit because of lack of controversy and that an appeal had been taken by the defendant, as plaintiff and appellant in the federal suit, that Mr. Conway, who is described as relator here, had never taken any appeal or otherwise disputed the findings of fact which reproduced his admissions.

Part 5 of the third affirmative defense, after referring to the fact that after the suit was brought and the findings had been made by the court to the effect that the law was void and unconstitutional, alleges that the defendant as party plaintiff to the other suit was induced to believe that Mr. Conway was of the opinion that the law was invalid and unconstitutional. That consequently he had no power or duty of prosecution and having in mind his official oath as Attorney General he might therefore rightfully refrain

[fol. 23] from any effort to enforce the law. It alleges that the defendant in having operated or permitted the operation of the two trains referred to had done so because of this inducement to believe in, and its belief in, the truth and sincerity of the relator's express admissions, and not otherwise. As stated in the argument before Judge Hall, these allegations are material in reference to the question of whether the violation may have been wilful, and whether, if the law be held constitutional and applicable in these two cases, the maximum or minimum or some intermediate figure should be imposed as the penalty for the violation. That is substantially the entire reason why they are included. There was a motion to strike, and the motion was denied.

The prayer of the complaint is for a finding and judgment that there has been no wilful violation; second, that the law is wholly void, invalid and unconstitutional, and therefore unenforceable as to all of defendant's operations both within and without the State of Arizona upon each and all grounds set forth; that there is no liability and that plaintiff take nothing by this action. There is also a prayer for costs and finally a prayer for general relief.

I am sorry to have taken so long, but as I warned the [fol. 24] court at the outset the answer is very extended. It is in substance, except of course, as to these two supplementary defenses, the complaint which was filed in the declaratory suit in the Federal Court in Phoenix and is likewise in substance the complaint which was filed and sustained by the three-judge court for the District of Nevada in the Nevada train limit case, which was heard and finally decided by the United District Court for Nevada between 1935 and 1937. The difference between this case and the Nevada case is simply that there we were talking of proposed limitations and were referring in our complaint to a present operation and what the proposed limitation would do. Here we are talking of a present limitation and referring to what the removal of that limitation would do for us in the betterment rather than in the Nevada case of what it would do by way of restriction.

The Court: We will take a brief recess before proceeding further.

[fol. 25] The Court: You had finished, had you, Mr. Mason?

Mr. Mason: Yes, your Honor.

Mr. Polley: We will call Mr. Skinner.

FRANK L. SKINNER, called as a witness on behalf of the plaintiff, having been first duly sworn by the court, was examined and testified as follows:

Direct examination.

By Mr. Polley:

Q. Will you state your name, please.

A. Frank L. Skinner.

Q. And your occupation?

A. Conductor of the Southern Pacific.

Q. And how long have you been employed by the Southern Pacific?

A. Twenty-four years.

Q. Will you tell the Court the experience you have had in railroading?

A. Well, I spent my entire life at it, started as call boy in 1910, and went from there into the repair department, went to switching in 1918, and then went in the road service the same year; been in the road service since then.

Q. Are you familiar with the Southern Pacific railroad's practice in regard to the makeup and movement of trains [fol. 26] out of the Tucson yards?

A. Yes, sir.

Q. Briefly, what are the duties of the chief dispatcher regarding the makeup and movement of trains out of the Tucson yard?

A. He issues the instructions in regards to the running and contents of trains.

Q. Is he the man that makes the decision as to how many cars will be put in a particular train?

A. It is over his signature. I am not positive whether he makes the decision or not.

Q. And how are his orders transmitted to the train crew?

A. They are telegraphed from the dispatcher to the operator, and the operator delivers them to the conductor.

Q. Is that over the signature of the dispatcher?

A. That is over the signature of the chief dispatcher; yes, sir.

Q. Now, Mr. Skinner, which member of the train crew is in charge of the train?

A. The conductor.

Q. Does that apply to both passenger and freight trains?

A. Yes, sir.

Q. Were you on duty as a conductor for the Southern [fol. 27] Pacific on April 4th, 1940?

A. Yes, sir.

Q. In Tucson?

A. Yes, sir.

Q. Did you take a train out of the Southern Pacific yard located at Tucson, Pima County, State of Arizona, on that day?

A. Yes, sir.

Q. And what time did that train leave?

A. We were called to leave here at 12:01 P. M.

Mr. Mason: May I interrupt you? I have no objection, your Honor, to the witness referring to the book which he has before him, but I think he should designate for the record the name of the book and the form that it is, and whether it is a book kept in his own handwriting.

The Court:

Q. What is the book that you hold in your hand?

A. It is a ~~conductor's freight~~ train book.

Q. That is a book that is kept by you?

A. It is kept by me, yes, sir, and it is a record of all cars and times called to leave, left, and delays on the road. It pertains to the record of the movement of all trains that the individual handles.

Mr. Mason: May I ask him a question?

[fol. 28] The Court: Yes.

Mr. Mason:

Q. It is an original record which each conductor keeps of his own, of the trains which he himself handles?

A. Yes, sir, that is all.

Q. Eventually becomes a part of the permanent records of the company, does it not?

A. Yes, sir; it is on file and the company keeps it.

Q. It is designated by a form number, is it not?

A. Yes.

Q. Will you state the form number for the record?

A. C. S. 2648.

Mr. Polley:

Q. What time did you say the train left Tucson?

A. At 12:20 P. M.

Q. That is, on April 4th, 1940?

A. April 4th, 1940.

Q. In which direction did it run?

A. West.

Q. Westward out of Tucson?

A. Westward from Tucson, yes.

Q. What type of train was it, freight or passenger?

[fol. 29] A. Freight train.

Q. How many cars did that train contain exclusive of the caboose, if you know?

A. Ninety-one cars, two loads and eighty-nine empties.

Q. What orders, if any, did you receive concerning the movement of this train?

A. I received our running orders from the operator over the signature of the chief dispatcher.

Q. Is that a certain form number of the Southern Pacific?

A. Yes, that has a form number.

Q. Do you know what that number is?

A. No, I don't. It is a "nineteen" order, but I don't know what the form number is on the order.

Q. And from whom did you receive that order?

A. From the operator, the telegraph operator in Tucson.

Mr. Polley: Heretofore there has been a supplemental motion to produce filed, covering all orders issued by the defendant or the defendant's agents in relation to and in connection with the operation on the Tucson Division of the defendant's railroad of freight trains referred to in plaintiff's first cause of action of the plaintiff's complaint. Is that record available, Mr. Mason?

[fol. 30] Mr. Mason: We made quite a search last night in response to the request from Mr. Strouss to find orders relating to the operation of this freight train to which the witness has referred, and I could not find in our record files for April 4th, 1940, the particular running order to which he refers.

Mr. Strouss: I wonder, Mr. Mason, in our discussion last evening there was an understanding we would have a stipulation as to how the train was made up and was operated by the chief dispatcher.

Mr. Mason: Yes. I don't think there is any question and I am willing to stipulate with opposing counsel, your Honor, that the train referred to by the witness—I think we should identify it by number sooner or later—was operated, and

that the dispatcher or some other person having the necessary authority issued the instructions that the train should operate with the consists which it actually contained as it departed from Tucson at or about 12:20 P. M. on April 4th, 1940.

Would that be an adequate stipulation?

Mr. Strouss: Yes, with the further explanation that the consists would mean the number of cars which were in the train.

The Court: The record may show the stipulation.

[fol. 31] Mr. Polley:

Q. Mr. Skinner, did you make any protest? You naturally saw the running order, did you not?

A. Yes, sir; I was given two copies of it.

Q. Can you state as nearly as possible what language it contained? Did it contain the number of the train?

A. Yes, sir. The order, as I remember it, said that engine 3764 would run extra, Tucson to Gila.

Q. And that was the engine that pulled the train referred to?

A. That was the engine that handled the train.

Mr. Mason: That is the standard form of order?

A. That is the standard form of written order for an extra train.

Mr. Polley:

Q. Did you make any protest before moving this train out of the yard?

A. Yes, sir; I filed a written protest to the superintendent.

Q. Did you receive any answer?

A. No, sir.

Q. Then, as I understand it—what was the number of that train again?

A. Extra 3764 west.

Q. Then I understand train No. Extra 3764 West containing 91 cars, exclusive of the caboose, was pulled out of [fol. 32] the Tucson yards, which is a terminal of the Southern Pacific Company on its regular main line track on April 4th, 1940, is that correct?

A. Yes, sir.

Q. How far was this identical train operated upon the line of the Southern Pacific Company?

A. Well, the train was kept intact into Eloy. We set out one empty at Eloy.

Q. Is Eloy within the limits of Pima County?

A. No.

Q. Then when it left Pima County the train still contained ninety-one cars exclusive of the caboose?

A. Yes.

Q. Do you know how many miles this identical train containing ninety-one cars was operated on the lines of the Southern Pacific Company in Pima County, Arizona?

A. Approximately twenty-six miles.

Q. What men constituted the train crew on this particular train?

A. I was conductor, brakeman O. N. Smith was the head brakeman, and brakeman Messer, swing brakeman, and Phillipson was the rear brakeman.

Q. Were there any other persons upon that train?

[fol. 33] A. Engineer Murphree and Fireman Thayer.

Q. Were there any other persons in the engine?

A. The road foreman of engines, Mr. Carr, rode the engine.

Mr. Strouss: Q. How was that train designated or known?

A. As an extra, Extra 3764, west.

Mr. Polley: That is all.

Cross-examination.

By Mr. Mason:

Q. Did you continue on the train to the end of your run?

A. Yes, sir, to Gila.

Q. To Gila?

A. Yes, sir.

Q. And when did you arrive at Gila?

A. Arrived at Gila at 6:20 P. M.

Q. That is six hours, isn't it?

A. Yes, sir, six hours.

Q. This train was what is generally known in ordinary railroad parlance as a drag, was it not?

A. As a drag, yes, sir.

Q. You had no rights over eastbound freight trains, did you?

A. That I couldn't say. I don't remember.

Q. You don't recall?

[fol. 34] A. I don't recall.

Q. Did you meet a number of eastbound trains?

A. We took the siding at Kino for 852.

Q. That is an eastbound freight train?

A. That is an eastbound freight train, yes, sir and we took siding at Eloy for—or at Picacho for first—856, and then we met second and third 854 at Maricopa.

Q. Both a trains at the same point?

A. Yes, sir.

Q. Did you take water at Maricopa?

A. Yes, sir, took water and picked up a water car.

Q. And you dropped an empty car at Eloy, didn't you?

A. You mean by the word "dropped" the drop we use, or do you mean set it out?

Q. Yes, you set it out.

A. Yes, sir, we set out a car at Eloy.

Q. And did you make any other meets before you got to Gila?

A. Yes, sir, we had a meet at Bosque, first—856.

The Court: Pardon me, did I understand you to say, Mr. Mason, that the Southern Pacific was not double-tracked across the State of Arizona?

[fol. 35] Mr. Mason: Your Honor, we will have a witness who will describe that exactly for you. There are some stretches of double track, yes sir. There is a short stretch out of Yuma. Then there is a stretch from Dome to Wellton.

The Court: But in this area here?

Mr. Mason: There is one stretch of double track between Tucson and Stockham which is a point—will you correct me, Mr. Skinner, now if I am wrong—a point four and one-half miles west of Tucson.

The Witness: Approximately.

Mr. Mason: Q. Your operation except for the short stretch between, the short stretch of track between Tucson and Stockham was entirely single track, was it not?

A. Yes, sir.

Q. And you did not meet or have any interference with passenger trains, did you?

A. No, there were no passenger trains out.

Q. You cleared all the westbound passenger trains out of Tucson.

Mr. Strouss: If the Court please, I don't see that this is proper cross examination. We haven't gone into any question of meets, or things of that sort.

The Court: What is the purpose of it?

[fol. 36] Mr. Mason: Well, I only wanted to find out what his delays were, what delays he had enroute. I understand he took six hours to get to Gila and I wanted to bring out what delays he had.

The Court: You mean by reason of any engine trouble?

Mr. Mason: No, I mean by reason of any train interferences, meets, etc. I think that is all I have.

Mr. Polley: Call Mr. Odegard.

K. C. ODEGARD called as a witness on behalf of the plaintiff, having been first duly sworn, was examined and testified as follows:

Direct examination.

By Mr. Polley:

Q. Will you state your name, please, and your occupation?

A. Conductor.

Q. You are employed by whom?

A. Southern Pacific.

Q. And how long have you been so occupied?

A. For thirty-two years.

Q. Will you relate to the Court your railroad experience?

A. About three years as a brakemen, about five years as [fol. 37] an extra conductor and brakeman, the rest of it as a conductor.

Q. Are you familiar with the practice of the Southern Pacific here in Tucson in regard to the makeup and movement of trains out of the Tucson yard?

A. Yes, sir.

Q. Is the Tucson yard a terminal of the Southern Pacific?

A. Yes, sir.

Q. You have just heard Mr. Skinner testify as to the above practice. Did he testify correctly?

A. Yes, sir.

Q. As to the duties of the chief dispatcher and the telegraph operators and the various clerks?

A. Yes, sir.

Q. Does the practice described by Mr. Skinner apply to both passenger and freight train operations?

A. Yes, sir.

Q. Were you on duty as a conductor for the Southern Pacific Company on March 2nd, 1940, at Tucson?

A. Yes, sir.

Q. I will ask you, did you take a train out of the yards of the Southern Pacific Company located in Tucson, Pima County, Arizona?

A. Yes, sir.

[fol. 38] Q. On March 2nd, 1940?

A. Yes, sir.

Q. And what type of train was that?

A. Passenger train.

Q. What was its number?

A. Number 5.

Q. Is that what it is known by?

A. Yes, sir.

Q. Was it a regular passenger train?

A. Yes, sir.

Q. Do you know how many cars that train contained?

A. Sixteen cars.

Q. What orders, if any, did you receive from the Southern Pacific concerning the movement of this train?

A. Train orders? You mean train orders?

Q. Yes, sir.

A. I don't recall. It being a regular train it could move out on a clearance without any orders, a regularly scheduled train.

Q. I notice you are referring to a record. What record is that?

A. This is the train book record, the trip on this particular date, train Number 5, which left Tucson March 2nd.

[fol. 39] Q. Does that record have any particular form number?

A. You mean the book?

Q. Yes, sir.

A. It has. I think it is 2036, I am not sure. Would you look at it? It is kind of blurred, right in the corner there.

Q. C. S. 2638. Is that an original record kept by you?

A. Yes, sir.

Q. And for what purpose?

A. Well, they refer back to number of cars, train crew, leaving time, arriving time, delays on the road. Then there is number of passengers handled, different things.

Q. In which direction was this freight train running?

A. West.

Q. Before moving this particular train, Mr. Odegard, did you make any protest?

A. Yes, sir; I asked the dispatcher for a message to handle sixteen cars.

Q. What do you mean by a message?

A. Well, a message giving me authority to go out of here with sixteen cars, as there was—you know fourteen cars was the limit up to that time.

[fol. 40] Q. Did you receive any such message?

A. No, sir.

Q. Was there anything at all said to you?

A. No, sir; he said he would not—they would not issue no message.

Mr. Strouss: Mr. Mason, as to this passenger train operation may we have the same stipulation, that is, the consists or train was made up under orders of someone having authority to so order, and the train was operated by the train crew under orders issued by somebody who had authority?

Mr. Mason: The same stipulation as in the case of the freight train, yes.

The Court: All right.

Mr. Polley: Q. What time of day did this train leave?

A. It left Tucson 5:45 P. M.

Q. What number did you say it was designated?

A. Number 5.

Mr. Booth: That is the Argonaut, isn't it?

A. Yes, sir.

Mr. Polley: Q. Then as I understand your testimony train, Number 5 containing sixteen passenger cars was pulled out

of the terminal yards of the Southern Pacific Company onto the main line track on March, 2nd, 1940, is that correct?

A. Yes, sir.

[fol. 41] Q. How far was this sixteen-car passenger train operated on the line of the Southern Pacific in Arizona?

A. To Yuma, Arizona.

Q. To Yuma?

A. Yes, sir.

Q. When it left Pima County how many cars did it contain?

A. Sixteen cars.

Q. Can you state how many miles this particular sixteen-car passenger train was operated upon the lines of the Southern Pacific Company in Pima County, Arizona?

A. Practically twenty-six miles.

Mr. Polley: That is all.

Cross-examination.

By Mr. Mason:

Q. Mr. Odegard, the train book which you hold in your hand, form C. S.—

Mr. Polley: 2638.

Mr. Mason: Q. 2638 is a record of not only the train to which you have referred, but other trains which you have operated, isn't it?

A. Yes, sir.

Q. It is a sample of the permanent record which you yourself keep of all your train operations when you are [fol. 42] conductor?

A. Yes, sir.

Q. Eventually it is turned over to the company and becomes a part of the company's permanent record, so far as you know, that is correct, is it?

A. Yes.

Q. The book is issued to you by the company as a blank?

A. Yes, sir.

Q. And when it is filled up you give it back to them?

A. Well, the passenger record, we keep them as a record.

Q. Do you eventually turn them over to the company?

A. No, sir; that is the difference between the freight and the passenger. On passenger you don't turn it back.

Mr. Mason: That is all.

Mr. Polley: That is all.

The State rests, your Honor.

Mr. Mason: We are prepared to proceed, your Honor, with the affirmative defense:

The Court: Well, if you are prepared to proceed we will work until noon.

Mr. Mason: The defendant will call Mr. Sines.

[fol. 43] B. S. SINES, called as a witness for the defendant, having been first duly sworn, was examined and testified as follows:

Direct examination.

By Mr. Mason:

Q. State your name, Mr. Sines?

A. B. S. Sines.

Q. Where do you reside?

A. Oakland, California, with headquarters in San Francisco, California.

Q. By whom are you employed?

A. Southern Pacific Company.

Q. In what capacity?

A. Executive assistant.

Q. Now, you describe yourself as executive assistant. In what department of the Southern Pacific Company are you employed?

A. That is on the immediate staff of the president in the executive department.

Q. What has been your education and subsequent experience in railroad service?

A. In 1922 I graduated from Cornell University with the degree of civil engineer; then worked for two and one-half years with the Illinois Central in the Chicago terminal, improvement department, on electrification and terminal improvement at Chicago, Illinois. In January, 1925, I went to work for the Southern Pacific Company at El Paso, Texas, in the engineering department where I remained for eight years. During that time I performed the ordinary routine duties in the division engineer's office,

and also was inspector and engineer in charge on various construction and maintenance projects of the railroad between Tucson, Arizona, and Tucumcari, New Mexico. In January, 1933, I was transferred to the San Francisco office, the bureau of transportation research, a part of the executive department. I remained in the bureau for four years during which time I made various surveys and studies for the guidance and as bases of recommendations to our officials and executives, and also served as a witness in various cases before the state commissions, the Interstate Commerce Commission and in cases in federal and state courts. In November, 1937, I became executive assistant as above described. Since that time I have performed, have made studies and surveys and made reports to our executives, and have assisted in determining the policy of the company. On July 15th, 1940, I was placed in active charge of the preparation of part of the present Arizona Train Limit case.

[fol. 45] Q. You say that you have participated in cases before the federal and state courts. Did you participate as a witness and otherwise in the preparation of the case for the Southern Pacific in the so-called Nevada Train Limit case, Southern Pacific Company versus Mashburn?

A. I did.

Q. In the federal court for Nevada?

A. Yes.

Q. Your experience in the engineering department was as an assistant in the office of the division engineer in El Paso, was it?

A. Yes.

Q. And included the subject of engineering problems and the working out of engineering construction and maintenance problems on the line of railroad between Tucson and Tucumcari?

A. That is right.

Q. Since then in San Francisco your work has been in connection with operating and construction problems, has it?

A. That is right.

Q. Carrying on the experience you gained previously, both your education as civil engineer and your experience in active railroad service?

A. Yes.

[fol. 46] Q. I will ask you if you have prepared for introduction here a map of the lines of the Southern Pacific Company.

A. I have had prepared such a map by the engineering department.

Mr. Mason: I will distribute copies of this, your Honor.

We ask that the map which has now been distributed be marked for identification as Exhibit Number 1.

Q. There is a counterpart of Exhibit Number 1 for identification on the easel in the court room?

A. Yes, that is an enlargement from the same tracing that the smaller exhibits were made from.

Q. Will you state whether the exhibit marked Exhibit Number 1 is a correct or a substantially correct reproduction of the underlying maps and records in the engineering department?

A. It is.

Q. As to the legend which appears under the Mileage Table on the righthand side, is that added by yourself or by the others who prepared the exhibit for you?

A. It was prepared under my direction and checked by myself.

[fol. 47] Q. Checked against the original mileage tables?

A. Of the Southern Pacific Company, yes.

Q. Will you state to the best of your knowledge and belief whether the exhibit is substantially true and correct?

A. It is.

Mr. Mason: We offer the exhibit in evidence as Number 1.

The Court: Any objection?

Mr. Strouss: Q. What are these distances on this mileage table, are they between the towns that are indicated just before the figures?

A. That is right.

Mr. Strouss: No objection.

The Court: It may be admitted.

The Clerk: Exhibit No. 1 in evidence.

Mr. Mason: Q. Now, Mr. Sines, there are certain portions of the exhibit which might well be explained here. Will you point out how double track and single track are respectively designated on the exhibit.

A. Looking at that portion of the Southern Pacific in Nevada between Lovelock and Rose Creek, there appears two parallel lines. This indicates double track. Immediately west of it, or to the left of Perth, Nevada, is a single dark line, indicating single track.

[fol. 48] Q. Is that designation used generally on all parts of the exhibit?

A. Yes.

Q. Now, between Roseville and Truckee you show two light black lines crossing and recrossing each other.

A. Yes.

Q. What is the explanation there?

A. In that area the operation is double track but the lines are separated; in some instances at a considerable distance, and not built upon the same alignment and profile.

Q. You show a somewhat similar indication between Tucson and Mescal, Arizona. Does the same explanation or a similar explanation apply?

A. That is right. The two tracks are operated as a double track, but are separated.

Q. I notice, too, that there are heavy solid lines and then lines of lighter density, too, also solid lines, on the exhibit. What is the distinction between them?

A. The solid lines indicate branch lines. The heavy solid lines indicate main lines and the lighter solid lines indicate branch lines.

Q. And I suppose that all double track is, of course, main line.

A. Yes.

[fol. 49] Q. I notice also on the exhibit a number of dashed lines, most of them distinguished by initials. What is the purpose of those?

A. Those are simply to indicate the major transcontinental lines in the western states, generally in the same territory served by the Southern Pacific.

Q. And I notice also that some of those dashed lines end in arrows with destinations shown, or points shown, names of cities shown.

A. That is right. As for example, in Utah the Denver & Rio Grande has a designation "To Denver".

Q. That indicates that the Denver & Rio Grande extends eastward generally to Denver?

A. That is right.

Q. I notice you show these other railroads mostly by initials.

A. That is right.

Q. Are those initial designations the ones commonly used in the railroad industry?

A. Yes, sir.

Q. To indicate those railroads?

A. Yes.

Q. What is the dashed line extending northward from a point near San Francisco to Eureka?

A. That represents the Northwestern Pacific, a sub-[fol. 50] sidiary of the Southern Pacific Company.

Q. Are there any other features of the exhibit to which you wish to call particular attention?

A. Yes. At junction points for foreign lines with the major transcontinental carriers that I have mentioned heretofore and also with the smaller railroads we have indicated the physical connections which make the Southern Pacific Company part of the net of railroads serving the entire United States. Starting in the upper lefthand corner of the map at Portland there are indicated connections with the Union Pacific, Northern Pacific and Great Northern. Extending to the right or easterly from Portland are indicated the Spokane, Portland & Seattle and the Union Pacific railroads. I need not cover the entire map, but it will be discovered that that principle applies at all of our junction points.

Q. Now one other feature which will be more material later, will you describe the condition which obtains between Weso, Nevada, and Alazon, Nevada where you have a designation "Southern Pacific-Western Pacific, paired track territory".

A. In that territory the Southern Pacific Railroad Company and the Western Pacific Railway Company have entered into a joint track contract by which the Southern Pacific line is operated in an easterly direction between [fol. 51] Weso and Alazon, and the Western Pacific is operated in a westerly direction between—before I go further—

Mr. Mason: May I suggest to the witness, your Honor, as I recall it, the operation is easterly over the Western Pacific and westerly over the Southern Pacific between these two points.

The Witness: That is correct.

The Court: I didn't get those points.

The Witness: The points are indicated by the black arrows pointing down, your Honor. Weso is the westerly limit of the joint track operation and Alazon is the easterly limit of the joint track operation.

The Court: Is that in Arizona, in our state?

The Witness: That is in Nevada.

The Court: In Nevada?

The Witness: Yes.

The Court: I was trying to find some such places here.

Mr. Mason: Q. Is it correct, Mr. Sines, that between these two points in Nevada which you have just mentioned the two railroads are operated as if there were a single road operating double track?

A. That is right.

Q. All trains of both companies operating eastward on [fol. 52] the Western Pacific and westward on the Southern Pacific?

A. Yes.

Q. The two tracks are substantially parallel although not necessarily adjoining, is that not correct?

A. Yes.

Q. Were there any other features of the exhibit which you wish to explain?

A. No.

Mr. Mason: Mr. Strouss; do you have any questions on the exhibit before we leave it for the time being? I don't mean to foreclose you from cross examination.

Mr. Strouss: No, I haven't any just now.

Mr. Mason: Q. Mr. Sines, do you know, and if so you may state whether the Inter State Commerce Commission issues certain regulations respecting the maintenance of accounts of railroads subject to the Interstate Commerce Act?

A. It does.

Q. Are these published and in printed form?

A. They are.

Q. Have you in your possession a copy of certain regulations issued by the Interstate Commerce Commission for the purpose just described?

[fol. 53] A. I have. The publication is entitled, "Uniform System of Accounts for Steam Railroads, Accounting

Classifications governing investment in road and equipment, operating revenues and operating expenses, income, profit and loss, and general balance sheet accounts, train-miles, locomotive-miles, and car-miles, prescribed by the Interstate Commerce Commission in accordance with Section 20 of the Act to regulate commerce, revised to January 1, 1936."

Q. Now is the issue revised to January 1, 1936, the latest revised edition of the commission's regulations that you have referred to?

A. Yes, and the one now in effect.

Q. It is the one currently in effect?

A. Yes.

Q. Do you know, and if so will you state whether the accounting practices of the Southern Pacific Company conform to the regulations issued by the Interstate Commerce Commission?

A. They do.

Q. Are the definitions of the various units applicable to the keeping of railroad accounts and records set forth in the regulations issued by the commission?

A. They are.

[fol. 54] Q. Do you find therein, for example, definitions for such units as train-miles, car-miles, etc.?

A. Yes.

Q. Now, referring to the commission's regulations, will you read there for the record the definition of a "train".

A. On page 227 of this publication—

Mr. Mason: We are perfectly willing to supply a copy or as many copies as are needed.

Mr. Strouss: No.

Mr. Mason: I am assuming that counsel know all about it. This is merely offered for the purpose of the record.

Q. Will you please read then.

A. On page 227 of this publication under the heading "Text pertaining to train-mile accounts", under the sub-heading, "Rules and Definitions" appears item 1.

"A train is a unit of equipment or a combination of units of equipment (exclusive of light locomotives) in condition for movement over tracks by self-contained motor equipment. A locomotive is a self-propelled unit of equipment designed solely for moving other equipment. A light loco-

motive is a locomotive in condition for movement by its own [fol. 55] motor equipment, uncoupled to cars, work equipment or dead locomotives. A motor car is a self-propelled unit of equipment designed to carry freight or passenger traffic, and is not to be considered a locomotive."

Q. Is there a definition there of a train-mile?

A. Item number 2: "A train-mile is the movement of a train a distance of one mile."

Q. Is there a definition also of locomotive-mile?

A. There is on page 231, under the heading, "Text pertaining to locomotive-mile account," under Item Number 1, appears the following:

"A locomotive is a self-propelled unit of equipment designed solely for moving other equipment. A locomotive-mile is a movement of a locomotive a distance of one mile under its own power."

Q. Have you there a definition of a car?

A. I have. On page 235 under the heading "Text pertaining to car-mile accounts" appears the following:

"A car-mile is a movement of a unit of car equipment a distance of one mile."

Q. That is the definition of a car-mile. The definition of a car as well, will you read that.

A. There is no definition of a car.

[fol. 56] Mr. Mason: I think we can suspend now, your Honor.

The Court: All right.

Mr. Mason: We have a few more questions of Mr. Sines after recess.

The Court: Until 1:30, I presume will be satisfactory. The court will be at recess.

[fol. 57] 1:30 P. M., November 19, 1940.

All parties being present as heretofore noted, proceedings were resumed as follows:

B. S. SINES, resumed the witness stand for further direct examination.

Mr. Mason:

Q. Mr. Sines, in the course of your experience with railroad reports and accounts, have you encountered the term "ton-mile"?

A. I have.

Q. Is that a term commonly used in such reports and statistics?

A. It is.

Q. Will you state just how the ton-mile is defined?

A. A ton-mile is a transportation unit computed by multiplying the weight by the distance traversed. For example, a ton carried one mile is a ton-mile.

Q. Are ton-mile units further described in various classes?

A. Yes, they are.

Q. What, for example, are those descriptions?

A. A ton-mile is subdivided into gross ton-miles and net ton-miles.

Q. Will you give an illustration of how gross ton-miles [fol. 58] are made or what falls in that description?

A. Gross ton-miles are computed by multiplying the weight of cars and contents exclusive of locomotives by the distances traversed. For example, a box car and contents weighing fifty tons traversing a distance of one mile negotiates fifty gross ton-miles.

Q. You spoke of net ton-miles, did you?

A. Yes, if that same box car has a pay load or if the contents of that box car are twenty-five tons the net ton-miles accumulated are twenty-five net ton-miles.

Q. For the movement for one mile?

A. Yes.

Q. Is there a further classification as between revenue and non-revenue ton-miles?

A. Yes, the net ton-miles are subdivided into revenue net ton-miles and non revenue net ton-miles. The revenue net ton-miles being those handled for the public and for which revenue is received and the non revenue net ton miles represent tonnage handled for the account of the railroad itself and is usually made up of material and supplies such as fuel, ties, and rail and other items.

Q. These units and ton-mile and its various separate descriptions [fol. 59] relate to the transportation of property, do they not?

A. Yes.

Q. Are there corresponding units made in connection with the transportation of persons?

A. Yes, we have passenger-miles.

Q. Those of course, divide into revenue and non-revenue passenger-miles, do they not?

A. Yes.

Q. Will you just define in your words the passenger-mile.

A. A passenger-mile is accumulated or manufactured when the passenger is carried a distance of one mile.

Q. If a passenger car contains 50 persons and moves for ten miles it will accumulate 500 passenger-miles?

A. Right.

Q. Referring to all of these definitions of units used in the measurement of railroad service or in the reporting of railroads, do you use these units as defined by you here in the preparation of various exhibits?

A. I have.

Q. Have they been used in the several exhibits which have been prepared for this case where those units appear [fol. 60]?

A. That is right.

Mr. Mason: I may say for the information of the court, although I think it is quite apparent, that this testimony is offered merely in a preliminary way to define certain units measuring railroad problems or used in the rendition of reports and which are also used in our exhibits prepared from the foundation of such reports.

The Court: It would be very helpful to the court in understanding the testimony.

Mr. Mason: I assume it will be, because we will be using these units from time to time.

The Court: Yes.

Mr. Mason:

Q. Did you in your previous testimony cover the subject of locomotive-miles?

A. Yes, that was the second series of a definition that I gave.

Q. Can you define for the court what is meant by the expression "train-hour"?

A. Trainhours represent the length of time that trains spend on the road between initial and final terminals, including time at intermediate stops.

Q. It does not include any time in initial or final terminals?

A. No.

[fol. 61] Q. What is meant by "average train speed"?

A. Average train speed for any district of a railroad is computed by dividing the train-miles negotiated by the trains in that district for a given length of time by the number of train-hours accumulated by the trains operating in the same district.

Q. That will give an average speed in miles per hour?

A. Yes.

The Court: You say that includes the stops at intermediate points?

A. Yes.

Mr. Mason:

Q. Mr. Sines, directing ourselves particularly to operations in Arizona, do you recall where the freight division points are in Arizona?

A. Yes, the first freight division point is Yuma; next is Gila, then Tucson. That is along the principal main line, besides which there is the secondary main line through Phoenix where the freight districts are Yuma to Phoenix and Phoenix to Tucson. Proceeding east from Tucson the next freight district is Tucson to Lordsburg. You said in Arizona—

Q. I mean the lines that are affected here.

A. The next succeeding freight district, the district from Lordsburg to El Paso. On the south line the freight districts are Tucson to Douglas and Douglas to El Paso.

Q. Do freight train crews ordinarily change at the points you have mentioned?

A. They do in all instances.

Q. Those are the normal runs of freight train crews between those points?

A. That is right.

Q. Will you state whether or not for purposes of designation a train originating, made up at Yuma, becomes a new train as it passes Gila?

A. It does become a new train as it passes Gila.

Q. It there requires a new crew and a new locomotive, normally?

A. Yes, and a new number designation.

Q. If that same unit comes to Tucson and without change or substantial change of consist, continues to move east, does it still require a new designation as train?

A. Yes.

Q. For how far, supposing it moves to El Paso by Lordsburg?

A. It will have a designation from Tucson to Lordsburg [fol. 63] and another designation from Lordsburg to El Paso.

Q. Even though there is no substantial change in the actual cars moving in it?

A. That is right.

Q. Will the same occur if moving by Douglas?

A. That is right.

The Court:

Q. Does that train bear the number, I am speaking of the freight train, of the engine? I took it from what the freight conductor said this morning, he was designating that train by the engine number.

A. That is in accordance with operating practice and applies to our west bound trains usually when there is no timetable authority for the movement of the particular train, and when that occurs the train assumes the engine number, as for instance, that first freight train this morning was Extra 3764 west. Our manifest trains west bound have designated numbers and usually our east bound trains have numbers which are not determined by the engine number.

Mr. Mason:

Q. You spoke of manifest trains. Perhaps you better explain what you mean by a manifest train.

A. A manifest train is run usually upon a predetermined schedule or a schedule which is repeated every day and [fol. 64] contains freight which is manifested or for which particular records are kept in the division and headquarters offices.

Q. Is that character of freight usually given preferred or more expedited service?

A. Yes.

Q. Does it move on schedule from centers of production or centers of accumulation to other centers of distribution?

A. Yes.

Q. Is it correct to say that manifest trains are generally the west bound schedule freight trains?

A. That is right. That is usually what we mean on the Southern Pacific when we speak of a manifest train. We are thinking of the west bound trains with high class merchandise freight. By the same token, however, our perishable trains east bound are also manifest trains and we have formed the habit of referring to them as perishable trains.

Q. Do they likewise operate on schedule?

A. Yes.

Q. That is on agreed time from original point of accumulation to ultimate point of distribution?

A. Yes, that is right.

Q. Assume that 70 cars of loaded perishables are accumulated at Yuma with engine and caboose and move east [fol. 65] ward across Arizona and through Lordsburg to El Paso. Where would the first change of locomotive and caboose take place?

A. Usually the locomotives would change at Gila. The cabooses would almost certainly change.

Q. Would there be a further change of locomotive and caboose at Tucson?

A. That is right.

Q. And again at Lordsburg?

A. That is right.

Q. And finally again at El Paso?

A. Yes.

Q. We are assuming that the train is broken up at El Paso for distribution to the various lines radiating from there?

A. That is right.

Q. How many actual trains would be involved in that movement?

A. There would be four trains in that movement.

Q. That would appear on the record as four different trains?

A. That is right.

Q. Whether there are four trains or one train, they would accumulate the same number of train-miles?

A. That is right.

Q. And the same number of car-miles?

[fol. 66] A. Yes.

Q. And the same number of locomotive miles?

A. Yes.

Mr. Mason: Your honor, of course Mr. Sines will appear as a witness subsequently in connection with more testimony, but the testimony now offered is for the purpose of laying a preliminary foundation for other testimony and I should like to withdraw him at this point, subject to such cross examination as opposing counsel may wish.

Cross-examination.

By Mr. Strouss:

Q. There is one thing, on this average speed, you say divide the train-hours into train-miles. In ordinary language that should mean divide the distance between the terminals by the elapsed time?

A. That is right.

Q. In other words, the train-miles would be distance between terminals and your elapsed time would be train-hours?

A. Yes.

Mr. Strouss: I think that is all for now.

(Witness excused.)

[fol. 67] C. C. LERICHE, was called as a witness in behalf of the defendant and being first duly sworn, testified as follows:

Direct examination.

Mr. Mason:

Q: Your name is C. C. Leriche?

A. Yes.

Q. Where do you reside?

A. Alameda, California.

Q. Are you employed by the Southern Pacific Company?

A. Yes sir.

Q. With headquarters at San Francisco?

A. Yes.

Q. What is your present position with the company?

A. Draftsman in the Motive Power Department.

Q. Is that a department of the company having to do with the building and maintenance of rolling equipment?

A. Yes sir.

Q. Including freight and passenger cars?

A. Yes sir.

Q. What has been your experience in railroad service?

A. I began in 1917 as an apprentice in the car department and from there in 1919 to 1923 I was a draftsman in connection with car work in the Sacramento general shops. In 1923 I was sent to the San Francisco general office to do drafting. In 1924 and 1925 I was again at the Sacramento general shops as a draftsman. In 1926 I was sent again to the general office for car drafting and designing. In 1927 I was sent to Chicago as an inspector on construction of freight cars.

Q. Were those cars being built by some other company for the Southern Pacific Company?

A. Yes sir. In 1927 to 1930 I was again in the Sacramento general shops as a draftsman. In 1930 I was assistant freight car foreman in the Sacramento general shops. In 1931 I was a draftsman again in Sacramento. In 1932 to 1935 I was an apprentice in the P. F. E. at Roseville. In 1935 I went back to the general office as a draftsman in the freight car department.

Q. In your work as an apprentice in the car department and also as an apprentice with the Pacific Fruit Express were you actually engaged in the construction of freight and passenger cars?

A. Yes.

[fol. 69] Q. As a draftsman and car worker were you engaged in the drafting and design of freight and passenger cars?

A. Yes sir.

Q. What is the character and nature of your work generally as a draftsman in the Motive Power Department at San Francisco at the present time?

A. I prepare drawings and designs and specifications for the construction of cars.

Q. Freight and passenger cars both?

A. Yes sir.

Q. You speak of the Sacramento general shops. Is that a general shop maintained by the Southern Pacific Company?

A. Yes sir.

Q. And within the Motive Power Department?

A. Yes.

Q. Will you state whether or not locomotives and cars are built there?

A. They do build locomotives and cars there, yes, sir.

Q. Do they also do repair work on locomotives and cars?

A. Yes sir.

Q. Is that one of the principal general shops maintained [fol. 70] by the Southern Pacific Company on its system?

A. Yes sir.

Q. Does the Motive Power Department maintain records and specifications of the equipment owned by the company?

A. Yes sir.

Q. Do those run back for a series of years?

A. They do.

Q. How far, if you know?

A. They go back as far as 1900.

Q. Do they show the design and successive design in freight and passenger equipment owned and operated by the company?

A. Yes sir.

Q. Speaking of your experience running down these dates I believe it shows you have some 17 years experience as a draftsman of freight and passenger cars and six years in repair, construction and building and inspection, is that correct?

A. Yes sir.

Q. Have you taken any courses of instruction in connection with your work?

A. I have.

Q. Will you state what they were?

A. I completed two courses from the International Correspondence School. One was for mechanical draftsman [fol. 71] and the other was for structural engineering.

Q. Do you have access to the records of specifications and drawings relating to freight and passenger cars which you have stated as being within the possession and maintained by the Motive Power Department?

A. I do, yes sir.

Q. Have you made any review of those records for the purposes of this case?

A. Yes sir.

Q. I show you an exhibit of one sheet which I will ask to be marked defendant's Exhibit No. 2 for identification.

The Court: It may be marked.

Mr. Mason: Bearing at the top the title, "Chronology of Freight Box Cars, year 1900 to 1940, Showing Design and Capacity Characteristics." Are you familiar with that exhibit?

A. Yes sir.

Q. Was that prepared in the Motive Power Department?

A. Yes sir.

Q. Were you associated with its preparation?

A. I reviewed it.

Q. Have you compared it with the original records from [fol. 72] which it was prepared?

A. Yes, sir.

Q. Will you state whether or not it is a substantially correct reflection of those records?

A. It is.

Mr. Mason: We offer the exhibit as Defendant's Exhibit No. 2.

The Court: Any objection?

Mr. Mason: Perhaps I should have said first I am willing that Mr. Strouss examine in order to determine the authenticity and all the other details before it is offered and I will withhold the offer until such time as Mr. Strouss has inquired.

Mr. Strouss: I just want to inquire,—this is a chronological statement of the development of the freight cars used on the Southern Pacific lines?

A. Yes, sir.

Q. It does not purport to refer to cars on any other system?

A. No sir.

Mr. Mason: It is freight cars owned by the Southern Pacific Company as distinguished from freight cars of other ownership which are from time to time used on our railroad, is that correct, Mr. Leriche?

[fol. 73] A. That is correct, yes sir.

Mr. Strouss: I have no objection.

The Court: It may be received in evidence.

(Document received in evidence and marked Defendant's Exhibit No. 2.)

Mr. Mason:

Q. Mr. Leriche, referring to Exhibit No. 2 and particularly to the illustration opposite the year 1903, is that the first year in which the steel under-frame appeared in the construction of Southern Pacific Company box cars?

A. Yes sir.

Q. What does the significance of the drawing appearing in column F at the extreme right of the exhibit show?

A. That shows a cross-sectional area of the center-sill.

Q. Of the steel under-frame?

A. Yes sir.

Q. Has the steel under-frame or other steel body construction been a feature of all cars built or acquired by the Southern Pacific Company since 1903?

A. Yes sir.

Q. Going down to 1911 does that drawing indicate the characteristics of the typical freight car as operated and owned by the Southern Pacific Company as of 1911 and [fol. 74] 1912?

A. Yes sir.

Q. What particular changes happened in 1913 which were significant as adding strength or other advantageous features to box car construction?

A. These cars built in 1913 had a steel superstructure and also a K-2 triple valve was applied.

Q. That is a part of the brake mechanism?

A. Yes.

Q. Was that an advance over previous installation?

A. That was an improved type of triple valve.

Q. What was the effect of building a steel superstructure on these box cars?

A. It gave a more rigid construction on the side frame.

Q. Did that add strength?

A. Yes sir, and you will also note in column F the area of the center-sills was increased from 18 inches to 23 inches.

Q. Did that add strength and rigidity?

A. That added strength and rigidity to the car.

Q. What was the principal change that occurred in the next succeeding years?

A. The next principal change occurred in 1916 when we applied frictional draft gears and also the cross-sectional [fol. 75] area of the center sills was increased from 23 to 26 inches.

Q. Is it correct that each of these blocks shown here in columns D, E and F represent capacity or size or cross section?

A. It does.

Q. And its relative scale to each of the others in the same column?

A. Yes sir.

The Court: Will you explain what that frictional draft gear improvement consisted of? What does that mean?

A. The draft gear prior to this time was just an ordinary coil spring gear and the frictional draft gear had a friction feature.

Mr. Mason:

Q. Will you explain just what the draft gear is on the car?

A. It is a device to which the coupler and yoke are fastened and this device, the friction draft gear takes up the shocks due to buffing or pulling and reduces the shocks to the car body.

Q. Is the draft gear a device by which the coupler and the coupler shank are attached to the car body?

A. Yes sir.

Q. They form a sort of intermediate connection by means [fol. 76] of which these frictional gears take up the shock of collision and coupling and pulling and handling of the car?

A. Yes sir.

Mr. Mason: Does that explain it to Your Honor?

The Court: I think so.

Mr. Mason:

Q. Will you explain the improvement which next occurred following 1916?

A. The next improvement occurred in 1919. The cars built during that year had type D couplers, cast steel coupling yokes, corrugated steel ends. Type D coupler

was a larger and stronger coupler than had been applied to cars prior to this time and cast steel coupler yokes are made of cast steel in place of wrought iron yokes that they used to have before and corrugated steel ends was a one-piece end which greatly added to the strength of the car.

Q. Did that have the effect of eliminating breakages of the car ends?

A. Yes sir.

Q. Each time that these improvements were made that you have described were box cars of older construction likewise given such improvement as far as possible?

A. Yes sir.

[fol. 77] Q. Were friction draft gears applied to older cars as they were brought in for repairs?

A. Yes sir.

Q. When cars were rebuilt were these corrugated steel ends placed on them even though they may have been built prior to 1916?

A. Some of them were, yes.

Q. What was the improvement, if any, next following 1919?

A. The next major improvement occurred in 1924. On cars built prior to 1924 the roofs were made of thin metal covering with a wood lining underneath and the cars built in 1924 had an all-steel roof. They also applied a heavier wheel, a 750 pound cast iron wheel.

Q. What was the effect of the application of the heavier wheel?

A. It was a little stronger design.

Q. Did that tend to eliminate wheel breakages?

A. Yes, it would.

Q. Was this 750 pound wheel,—did that become a standard requirement on all cars?

A. It did, yes.

Q. Is it now a standard requirement?

A. The wheel we have now is also 750 pounds but instead of being what they call a double plate wheel it is a single [fol. 78] plate wheel.

Q. That is shown as the 1927 improvement?

A. Yes.

Mr. Strouss: May I ask, when you say "all cars" you mean all Southern Pacific Company owned cars?

Mr. Mason: I was going to ask about that.

Q. Is this requirement of a 750 pound single plate wheel a universal requirement in the United States now?

A. Yes, it is.

Q. On all cars which are handled in interchange between carriers?

A. Yes sir.

Q. Between standard railroad carriers?

A. Yes sir.

Q. The exhibit indicates an improvement in 1925. Will you go into that please and state what happened there?

A. In 1925 we applied heavy graduating springs in the triple valves. The purpose of that was to overcome undesirable emergency application of the brakes. I might say that the Association of American Railroads interchange rules effective January 1st, 1935 made the application of the heavy graduating springs mandatory when airbrakes were cleaned. We started applying these heavy triple [fol. 79] valves as you see here in 1925. This same series of cars were built in 1925, the center-sill-area section was also increased from 26 to 29 square inches and an auxiliary handbrake lever was also applied. The purpose of the auxiliary handbrake lever was to increase the breaking power applied by hand. That about covers the 1925 improvements.

The Court: Those handbrakes I presume were used in your local switching after the cars were cut loose from the switch engine?

A. Yes sir.

Mr. Mason:

Q. In 1927 I think you have already referred to the application of single plate wheels?

A. Yes sir.

Q. Will you proceed to the next improvement following 1927?

A. That occurred in the years 1936 and 1937. During that year the principal change was an all-steel superstructure and also steel side doors, power handbrake, application of the A. B. airbrake, type E couplers and single snubber springs were applied on the trucks; No. 15 brake-beam applied on the cars in 1936 and No. 3 beam applied on the cars in 1937.

Q. Are those brake-beams heavier than the ones previously used?

[fol. 80] A. Yes sir.

Q. And less liable to breakage?

A. Yes sir, and also applied a brake-beam safety guard and bottom rod supports. The purpose of those two items are in case any of the parts of the brake hanger should break it wouldn't fall to the earth, the bottom rod would support it and prevent it from falling to the ground.

Q. And tends to eliminate the so-called dragging of the brake-beam?

A. It would tend to eliminate a derailment too.

Q. I notice in 1936 and 1937 the cars constructed in that year had a smaller cross-section area of the center-sill than in 1927. How did that occur and what, if anything, was done to compensate for that reduction in area?

A. With the all-steel superstructure framing additional strength was obtained.

Q. Did the reduction of the center-sill area result in any less strength of the car from the standpoint of resistance to collapse or buckling?

A. No, it did not. These cars here were constructed in accordance with the A. A. R. recommendations. The A. A. R. tested five of these designs in 1933 and found this to be a very suitable design.

Q. Proceeding to the next and final change which is [fol. 81] shown on the exhibit, will you state what that is and what its effects have been?

A. The next and last exhibit covers the cars that are now being built during the year 1940.

Q. Are these cars presently in service?

A. No, they are not.

Q. They are about to be acquired, are they?

A. Yes. The improvements there consist namely, of a swivel shank coupler, coupling center device and metal running boards, metal brake step, W-section corner posts, steel floor plate applied across door-way, Wine brake balancer, brake hanger wearing plates and brake pipe anchors.

Q. What does the Wine brake balancer accomplish?

A. It returns the force set up in the foundation of the brake rigging to the car body from which it originates and tends to prevent the truck from screwing over to the side and also provides a better means of adjustment to the brakes due to the brakeshoe wear; it is more accessible.

Q. Going back to Exhibit No. 2 I notice in 1909 there appears the item "Cast steel truck side frames." What type of construction was replaced by the cast steel truck?

A. The arch bar type of truck frame.

Q. Do cars with arch bar trucks now operate over our [fol. 82] lines in interchange service?

A. No.

Q. When I say "cars," I mean freight cars.

A. Yes.

Q. When I speak of "interchange service" do you understand what I mean?

A. Yes.

Q. Will you explain what interchange service is?

A. It means the car is going from one railroad line to another, that would be interchange over a different system like the Southern Pacific and the Union Pacific, that would be an interchange.

Q. Is it correct that a freight car equipped with arch bar trucks cannot now be operated from Southern Pacific Company through an interchange point to the Union Pacific?

A. No, it can't, not with an arch bar truck.

Q. Are any cars with wooden underframes now operated in interchange service or is there a restriction on the interchange of wooden cars?

A. I believe there is a restriction on the operation of wooden underframe cars in interchange.

Mr. Strouss: Let me ask a question. We are getting into something that is a matter of record. I would like to ask a question or two before we have any more of this inter-[fol. 83] change. How are the rules of interchange governed?

A. I don't quite understand the question.

Mr. Strouss: Who determines what cars are permissible in interchange?

A. The I. C. C.

Q. Is it the I. C. C. or the American Railway Association?

A. I would say it is the I. C. C.

Mr. Strouss: I submit to counsel this witness is not qualified. A. I understand these interchange rules, your American Association puts out its rules of interchange on cars.

Mr. Mason: As to that I am not certain but it is my impression that the Association of American Railroads

of its own motion does impose certain restrictions upon interchange of cars not having the desired equipment.

The Court: That is requiring them to come up to certain standards?

Mr. Mason: Yes, but whether it be the American Association itself or the I. C. C. I am not certain. The I. C. C. may interpose certain restrictions.

Mr. Strouss: That is not the ordinary procedure as I understand it and if there are any orders of the I. C. C. requiring certain types of equipment before cars are accepted as interchange I think those orders should be produced. They are the best evidence and not hearsay testimony of a witness and I don't think this witness is qualified.

Mr. Mason: Perhaps I should not have entered upon the subject except merely for the information of the Court, but whatever the rules may be we will produce them for your examination and we can make certain between ourselves as to whether it is the Association of American Railroads acting as the agency of all the railroads or the I. C. C. which imposes these interchange requirements.

Mr. Strouss: I say that, Mr. Mason, because with respect to the A. A. R. in particular, because I did inquire of the I. C. C. whether they had issued an order on interchange and was advised they had not and that the American Railroad Association had. So I take it that at least part of your interchange is governed by rules of the American Association and not fully by the I. C. C. I think we should have the authority or the rules themselves produced and not the hearsay testimony of the witness. I think, if the Court please, I will ask that the testimony of this witness as to interchange be stricken as not the best evidence.

Mr. Mason: I think that is a pretty generic objection, Mr. Strouss. Some of that testimony was perfectly competent and relevant.

The Court: I will deny the motion as to the striking of all of it; I think as to some of the last questions the motion might be good.

Mr. Booth: I suggest when the record is written up that counsel direct what portions he wants stricken.

Mr. Strouss: I have no objection to having evidence come in here as to what the rules of interchange are, in fact I think we should have that but I think it should come in in the proper way.

Mr. Mason:

Q. Mr. Leriche, have you before you a statement or chart consisting of one sheet entitled, "Southern Pacific Company Lines, Comparison of freight cars of steel, steel under-frame and other construction, years 1903 to 1939?"

A. Yes sir.

Mr. Mason: I will ask that the statement be identified as Defendant's Exhibit No. 3.

The Court: Before you go on with that there are one or two questions I would like to ask of this witness. How long does it take these freight cars to become obsolete? What is the average life? You are showing here on your chart with different types of freight cars from 1900 up [fol. 86] to date. What, for instance, would be the oldest car that is now in use of these different types?

A. As best I can recall I would say there are still some cars that were built in 1909 probably in service.

The Court: Do I understand that even those old cars from time to time as they go into the shop are remodeled and certain of these appliances and improvements made on the old type of car?

A. Some of the improvements are made, yes sir.

Mr. Mason:

Q. Is it correct, Mr. Leriche, that these older types of cars when they come in for repairs, particularly general repair, are given such of these improvements as can be applied?

A. Yes sir.

Q. For example, replacement of arch bar trucks by cast steel side frames?

A. Yes sir.

Q. Application of the later type triple valve?

A. You mean the K-2 triple valve?

Q. Yes?

A. Yes.

Q. Replacement of weak graduating springs by strong graduating springs?

A. Yes sir.

Q. Replacement of older type couplings by new ones? [fol. 87]

A. Couplers and also wheels.

Q. What about draft gears?

A. We apply nothing now but A. A. R. certified friction draft gears.

Mr. Strouss: Do I understand your question to be whenever any car goes in it is given all of these improvements?

Mr. Mason: No, I didn't mean to infer that. I meant only to suggest when cars go into the shops for general overhaul these newer appliances are applied so far as they can be. There are some cars that obviously you couldn't do that with.

Q. Where these older cars cannot be brought down to date or up to the same character of strength and efficiency of the later type cars what is done with them? Are they restricted to any particular use?

A. They convert a lot of them into M and W cars, outfit cars.

Q. By "M and W cars" what do you mean?

A. Maintenance of way.

Q. Then what are they used for?

A. They are used for crews working on the tracks to live in.

[fol. 88] Q. Used for bridge crews and track repair crews?

A. Yes.

Q. Do they move from place to place frequently or do they stand idle?

A. No, they stand for quite a while.

Q. Referring to the statement which has been marked for identification No. 3, how was this exhibit prepared?

A. It was prepared from the records of the Southern Pacific Company.

Q. Motive Power Department?

A. Motive Power Department.

Q. Have you compared it with the original records?

A. Part of it, yes sir.

Q. Are the figures which appear thereon reproduced from the records of the Motive Power Department?

A. Yes sir.

Q. Have you made any check to determine whether the exhibit is correct?

A. I have.

Q. Will you state whether or not it is a true and correct representation of what appears from the original records?

A. Yes sir.

[fol. 89] Mr. Mason: Do you wish to ask any questions before I offer the exhibit, Mr. Strouss?

Mr. Strouss: I would like to find out something about it so I will understand it.

Mr. Mason: I intend to ask those questions but I don't want them to appear of record until the exhibit itself is of record.

Mr. Strouss: May I have just a moment then? This refers only to Southern Pacific Company owned cars?

A. Yes sir.

Mr. Strouss: It purports to show the number of steel under-frame and other construction cars?

A. This bottom black line here shows the steel and steel under frame cars and ownership and different years. You will notice at the bottom of the page we have the years from 1903 to 1939; it shows the ownership of those cars in those years. You will notice beginning in the middle we have a dotted line which shows the number of cars with steel center sills and the top black line indicates the total number of cars owned, including wood, steel center sill cars, all-steel and steel under-frame cars.

Mr. Strouss: I have no objection.

The Court: It may be admitted in evidence.

[fol. 90] (Document received in evidence and marked Defendant's Exhibit No. 3)

Mr. Mason:

Q. Referring to Exhibit No. 3 in evidence, Mr. Leriche, am I correct in understanding that the bottom line which appears to have the designation "A, steel and steel under-frame cars" indicates from year to year the total number of steel and steel under-frame cars owned by the Southern Pacific Company?

A. Yes sir.

Q. Then commencing at 1916, the dashed line indicates the total number of steel and steel under-frame cars and as well those cars with steel center sills which the Southern Pacific Company owned?

A. Yes sir.

Q. And the line, the solid line designated as line "C", "Total Cars" indicates for each year from 1903 to 1939 the total ownership of freight cars of all classes of construction including wooden cars in addition to the others?

A. That is right.

Q. In order to get at the number of wooden cars owned in any particular year would it be correct to take the difference between the figure of total cars and the figure of steel and [fol. 91] steel under-frame and steel center sill cars for that particular year?

A. Yes, that is right.

Q. You would have to make a subtraction of figures shown on the exhibit to get the number of wooden cars?

A. We did that here with the two top columns.

Q. You subtract Column A from C up to year 1915?

A. That is right.

Q. And column B from Column C after the year 1916?

A. That would give the total wood cars.

Q. To get at the number of cars with steel center sills as distinguished from those of steel construction or, with steel under-frames could you get at that by taking the figures in Column A from those in Column B?

A. That is right.

Q. Am I correct in this, that the figures corresponding to Line C in Column C are inclusive of those corresponding to Lines A and B in Columns A and B?

A. State that again please.

Mr. Mason: Will you read the question?

(Question read by the Reporter.)

[fol. 92] A. That is right.

Mr. Mason: If I may suggest to Your Honor this exhibit perhaps goes far towards answering your question as to the change in the development of cars and how the number of steel cars rises as the number of wooden cars fall.

Q. Have you made any calculation as to the number of wooden cars of Southern Pacific Company ownership as of the end of the year 1939?

A. At the end of the year 1939 they owned a total of 557 wood cars.

Q. That is the difference between this figure of 41,299 in Column C and 40,742 in Column B on Exhibit No. 3?

A. Yes sir.

Q. Have you made any computation or can you tell us from the exhibit readily how many wooden cars Southern Pacific Company owned as of June 30, 1912, that being the year in which the Train Limit Law was adopted?

A. June, 1912 they owned 13,319 wood cars.

Q. Can you tell me what percentage that was of the total ownership in that year or it is capable of calculation from the exhibit, isn't it?

A. Just a little under 50 per cent.

[fol. 93] Q. And the percentage in 1939 was the relationship between 557 and 41,000?

A. That is right. I might add that of these 557 owned as of December, 1939 that 285 of those are narrow gauge and the rest comprise tank cars, cabooses and logging cars.

Q. Are there any narrow gauge lines in Arizona that you know of?

A. No, I don't believe there are.

Q. I would like to have you refer to statement entitled "Chronology of Passenger Coach and Chair Car", Defendant's Exhibit No. 4 for identification. Referring to the statement marked Defendant's Exhibit No. 4 for identification and which bears title "Chronology of Passenger Coach and Chair Car, year 1900 to 1940 Showing Design and Improvements". Are you familiar with the manner in which this exhibit was prepared?

A. Yes sir.

Q. Will you state whether or not it was prepared in similar fashion to No. 2?

A. I prepared this exhibit myself.

Q. From the records of the Motive Power Department?

A. Yes sir.

Q. Does it refer entirely to passenger equipment of Southern Pacific Company ownership?

[fol. 94] A. Yes sir.

Q. And only to coaches and chair cars?

A. Yes sir.

Q. It does not refer to Pullman equipment at all?

A. No, it does not.

Q. Or to baggage equipment?

A. No sir.

Q. Is the statement a true reflection of the original source from which you prepared it?

A. Yes sir.

Mr. Mason: Do you wish to ask any questions, Mr. Strouss?

Mr. Strouss: No, I have no objection.

Mr. Mason: I will offer the exhibit as No. 4.

The Court: It may be admitted.

(Document received in evidence as Defendant's Exhibit No. 4.)

The Court: Before you leave the other exhibit there is one other thing I wanted to ask about. I judge from this chart that as of the end of the year 1939 the Southern Pacific Company had considerably fewer Freight cars than they owned back in 1929 to '32 and '33?

A. Yes, they had.

The Court: A very decided decrease in the number?

[fol. 95] A. Yes.

The Court: How do you account for that?

A. The older cars are being dismantled and they haven't built so many in recent years to take their place.

The Court: Depression years?

A. Yes, sir.

Mr. Strouss: Might the difference in capacity of the later cars have had something to do with that?

A. I don't think that would because the capacity hasn't been increased since 1911.

The Court: Does that necessarily follow that the business of the company would be decreased somewhat at least in proportion to the number of cars owned?

A. I would say that it would, yes.

Mr. Mason: Of course, Your Honor, we will have figures showing exactly the amount of tonnage and the amount of car miles we have made.

The Court: There is such a decided downward curve.

Mr. Mason: I think the answer is found in this that we are getting a greater utilization of our equipment.

[fol. 96] The Court: All right.

Mr. Mason:

Q. Going to Exhibit No. 4, does this exhibit indicate the improvements made in passenger car equipment from year to year or during the various years in the same manner and along much the same lines as No. 2 that shows for freight equipment?

A. Yes sir.

Q. Referring to the change effective in 1913 will you state whether any substantial improvements were made at that time and if so what they were?

A. The major improvement in 1913 was the strengthening of the car structure in general by increasing the size of the center sills from 10 inch 25 pound I-beams to 15 inch 60 pound I-beams and application of an improved type of brake called the "L and N"; also Sharon couplers, a heavy and stronger coupler applied in place of the Janney coupler.

Q. Had steel construction taken the place of wood construction prior to 1913?

A. The construction of the wood car commenced in 1906; the first steel car built in America was constructed in the company shops at Sacramento. It was an all-steel construction [fol. 97] with the exception of the inside finish which was mahogany.

Q. Is it correct that all cars built since 1909 have been all-steel construction?

A. Yes sir.

Q. Are there any standards promulgated by any government department which are followed in the construction of Southern Pacific Company passenger cars?

A. All cars are constructed in accordance with the United States Railway Mail Service specifications for mail cars.

Q. Those specifications I take it refer to the equipment, the under-frames and the general construction?

A. When I say "all passenger cars" I mean coaches and chair cars and diners, that is with respect to strength.

Q. Does that include the brake appliances, the couplers?

A. No, the specifications do not cover that phase of it.

Mr. Strouss: I don't object to him going a little way but I think we are getting into something where the best evidence would be the specifications themselves.

Mr. Mason: I think the witness is qualified as having [fol. 98] stated he is a designer and draftsman of passenger car equipment.

Mr. Strouss: Perhaps so, but he is now testifying what are the specifications required by some governmental body. Those specifications themselves would be the best evidence.

Mr. Mason: If counsel desires we can produce those. I didn't intend to pursue the subject any further but we can produce those specifications of the Railway Mail Service. They must be readily available in our Motive Power Department.

The Witness: Yes, sir.

Mr. Mason:

Q. As to improvements subsequent to 1913, will you pick out the more important improvements, especially those having to do with the strength or convenience of operation?

A. In 1914 construction of the ends was strengthened and also straight electric lighting was applied with an axle generator.

Q. What type of lighting was done away with that existed prior to the use of the electric light?

A. Prior to 1914 cars were equipped with combination gas and electric lighting. They were equipped with gas lights and had a through train line and you could have electric lights providing there was a baggage car that was [fol. 99] equipped with a generator on the front end to supply the electricity. That was called combination gas and electric. The next year, 1914, it went straight electric with the application of an axle generator which supplied the electricity for each car. The next major change occurred in 1921, improved type of brake equipment, called the Universal equipment, was applied; flush hoppers and electric ceiling fans. In 1923 the length of the cars was increased from 68 feet 6³/₈ inches over the platform to 80 feet 5¹/₂ inches, and the seating capacity increased from 72 to 90. Six wheel trucks with clasp brakes applied. A.A.R. Type "D" couplers and quadruple shear yokes.

Q. What about the 1927 improvements?

A. The 1927 improvements consisted of the application of pressed steel body bolsters in place of cast steel body bolsters which were on cars built prior to this time; integral pedestal type trucks applied which consisted of pedestals being cast integral with the side frame. Prior to this time the pedestals were bolted to truck frame. Cars were also equipped with locking center pins and the heat was thermostatically controlled. These double deck spring seats were applied which provided more riding comfort to the passenger.

[fol. 100] The Court: What is that locking center pin?

A. Prior to this time the center pin is what they commonly call a king pin, making the connection between the truck and car body, just a pin drops in there, but the locking center pin is put in there, it is locked so that in case of derailment the car couldn't leave the truck. In other words,

if a car tends to lift off the rails it would pull the truck with it. In 1928, the improvement consisted of installation of men's and women's wash room separate from the toilet; porcelain wash basins; size of journals increased to 5½ by 10 and two inch by two inch train line valves applied. The next year, 1929, the principal improvement was the installment or inclusion of a men's and women's lounge and double pan hoppers.

Mr. Mason:

Q. When did the streamline construction first appear?

A. That first appeared in 1937.

Q. What are these units illustrated here opposite 1937? Of what train operated by the company are they characteristic?

A. The Daylight.

Q. Is the same true of the cars shown here for 1939?

A. Yes, sir.

[fol. 101] Q. Are those air-conditioned?

A. Yes, they are.

Q. Where do those trains operate? Entirely in California?

A. They operate between San Francisco and Los Angeles.

Q. Are there any cars of the type similar to and bearing the same general characteristics and improvements as these shown for 1939 now on order?

A. There are, yes, sir.

Q. Will any of those operate in Arizona?

A. I believe some of them do, yes.

Q. Do you know for what trains they have been particularly ordered?

A. The Lark and San Joaquin.

Q. Where does the Lark operate?

A. Los Angeles and San Francisco.

Q. And the San Joaquin?

A. Los Angeles and San Francisco also.

Q. Has there been any improvement in the steam train line as between the earlier type of cars and those now in use?

A. Yes, there has. Any cars built prior to 1909 were equipped with inch and a half steam train line and one and a half by one and a half end valve. These one and a half

[fol. 102] by one and a half end valves were subsequently changed out and replaced with two inch by one and a half end valves and also the train line was increased from inch and a half to two inch.

Q. What about the connections between cars?

A. 1930 we began the application of two inch flexible metallic train line connection and two inch by two inch end train line valve was also started and at the present time we have about 75 per cent of our equipment equipped with two inch steam train line connections, metallic connections.

Q. What is the advantage of this larger train line and the flexible metallic train line connections?

A. It gives you a greater supply of steam which results in greater efficiency in heating of cars at the rear end of the train.

Q. Are cars thus equipped in use on the principal main line trains?

A. Yes, sir.

Q. Where is the older type of equipment or equipment not so fixed up? Where is that used?

A. We have, as I said before, practically all of our equipment equipped with a full two inch train line with a metallic conduit.

Q. You said I think that all-steel construction has prevailed in passenger car equipment since 1909. Are there any wooden passenger train cars of Southern Pacific Company ownership at the present time?

A. Yes, we still have some.

Q. Have you any figures to show how many such wooden cars were owned by the company as of December 31, 1912?

A. December 31, 1912 we owned a total of 1554 cars which included observation, dining, chair, coach and the head-end cars such as baggage, baggage and mail and postal cars.

Q. How many of those were steel? How many of those of the baggage, postal and mail?

A. 150 head-end cars were steel.

Q. How many coaches were steel?

A. 221.

Q. How many chair cars were steel?

A. 52.

Q. Did we have any steel dining cars or steel observation cars as of December 31, 1912?

A. No, we didn't.

Q. And the balance I take it of the 1554 you mentioned were wooden cars?

A. Yes, sir.

Q. As of December 31, 1939 are there any wooden head- [fol. 104] end cars still in the company ownership?

A. 20.

Q. Are there any wooden coaches still in the company ownership?

A. One.

Q. Are there any wooden chair cars?

A. One.

Q. Are there any wooden dining cars or observation cars or lounge or tavern cars of wood of company ownership at the present time?

A. No, none at all. We have one dining car with a steel under-frame.

Q. You say these are of company ownership. Do you know whether they are in use or not?

A. To the best of my knowledge none of these wooden coaches or this wooden coach is in any service at all.

Q. When was air conditioning on Southern Pacific Company passenger train equipment first commenced?

A. It was first commenced in 1932 in our diners.

Q. Were coaches subsequently air-conditioned?

A. We began to air condition the coaches in 1935.

Q. Do we have any non-air conditioned diners in the service that you know of at the present time?

[fol. 105] A. No, sir.

Q. I think in connection with the freight car exhibit you stated that improvements where they could be made to the earlier and older types of freight cars were made in line with the improvements placed on the newer cars constructed. Will you state whether or not a similar policy and practice is followed in connection with passenger train cars?

A. It is, yes, sir.

Mr. Mason: I think that is all for the present.

The Court: Any cross-examination of this witness?

Mr. Strauss: Yes, I have some questions.

The Court: We will take a recess at this time.

Thereupon a short recess was taken at 2:50 p. m. November 19, 1940, after which proceedings were resumed as follows:

[fol. 106] Cross-examination:

By Mr. Strouss:

Q. Mr. Leriche, the steam train line, what is this valve you spoke about, the end valve?

A. That is the valve on the end of the train line to which the hose which connects between the two cars is fastened to.

Q. And the present valve is now $1\frac{1}{2}$ by 2, is that correct?

A. $1\frac{1}{2}$ by 2 did you say?

Q. Yes, that is what I understood you to say in your direct examination.

A. No, I think most of those have been changed out now. I will read it just as I have it in my notes.

Q. All right.

A. Cars built in 1909 were equipped with 2-inch steam train lines and end valves, having 2-inch inlets and $1\frac{1}{2}$ -inch outlets. The connection between the cars was of $1\frac{1}{2}$ -inch rubber hose with $1\frac{1}{2}$ -inch couplers. Cars built prior to 1909 were equipped with $1\frac{1}{2}$ -inch steam train line, $1\frac{1}{2}$ by $1\frac{1}{2}$ -inch end valves which were subsequently changed out and replaced by 2-inch train line and 2-inch by $1\frac{1}{2}$ -inch end valves. All right. Now then, in 1930 the application of 2-inch flexible metallic train line connection and 2-inch [fol. 107] by 2-inch end train valves was started, and at the present time about 75% of our equipment is equipped with full 2-inch steam train line and connections.

Q. So that now you have a full 2-inch train line all through the train?

A. Yes.

Q. And one of the purposes of that, as I believe you testified, was to give greater efficiency in heating cars in the rear end of the train?

A. Yes.

Q. That is one of the problems that you have to overcome in designing cars and passenger car equipment.

A. Yes, sir.

Q. What is this auxiliary handbrake lever you refer to on the freight cars? I ask that because that is a new one on me.

A. Well, the auxiliary brake lever is an auxiliary lever placed in between the cylinder push rod and a brake connection that would eventually lead up to your freight train. The purpose of that was to increase the braking power applied by hand.

Q. That is down under the car?

A. Yes. —

Q. It is operated from the ground then; I take it. [fol. 108] A. No, you see when you operate your hand brake wheel there is a chain down to the end of the brake staff, which connects or ought to connect with the hand brake connection, and this connection is in turn connected to this auxiliary brake lever which is in turn—which force is then transferred to the cylinder lever.

Q. Then the hand brake would still have to be applied from the top of the car?

A. Oh, yes.

Q. I notice in the pictures of the three cars they designed in 1936 and 1937 and 1940 that the hand brake is not shown on the top.

A. Well, that is what we might term a multi-power hand brake.

Q. It was put on the end?

A. Yes. —

Q. Now, this design beginning from 1900 and going down through each of these improvements, has been for the purpose of increasing the strength of the freight car?

A. Yes, all-steel tends to increase that center sill section.

Q. The steel construction of the car itself and the steel frames are built for the purpose of strengthening the cars? [fol. 109] A. Yes, sir.

Q. That is so it can withstand the shocks of strains and stresses that the car is expected to receive in the ordinary usage in transportation?

A. Yes, sir.

Q. And from this increased strengthening of the car is it reasonable to assume that those stresses and shocks and strains have increased with the amount of transportation, requiring stronger cars and heavier construction to meet the shocks and strains that the cars are now called upon to meet than they did back in 1912 and 1913?

A. Yes.

Q. Now you don't mean to testify that the cars which are shown as designed in 1936 and 1937, that that represents the cars which are now in use, the company-owned cars which are now in use?

A. Not all of them, no.

Q. Not all of them?

A. No.

Q. Just those—

A. Built in those years.

Q. And beginning with the cars designed in 1909, you have testified about some of those cars which are still in use?

[fol. 110] A. Yes.

Q. And each of the years subsequent thereto?

A. Yes.

Q. So that the cars, the company-owned cars now in use; there may be cars designed in 1909, 1911, 1913, 1916, 1919, 1924, 1925 and 1927.

A. That is right. As far as the year 1909, I wouldn't be positive of that unless I looked up the records.

Q. Now then, on your Exhibit 3 you say, referring to the line A, "steel and steel underframe cars," what do you mean by the term "steel"?

A. In other words, all-steel; that is what that means.

Q. That is, the car is steel construction all the way through?

A. Yes.

Q. Body and top and underframe and sill?

A. As represented in 1936, 1937 and 1940.

Q. But all the improvements which are shown here, your total cars that are shown on your columns A, B and C, column B represents those with the steel construction throughout, steel underframe and steel center sill?

A. Column B represents steel and steel underframe, and cars with steel center sill.

[fol. 111] Q. And those are the only improvements which you show having been placed in all of the cars under that column. I mean if there have been changes in the triple valves it would not be reflected in this exhibit?

A. No, this exhibit just merely shows the ownership of the cars.

Q. And the improvements in the cars with respect to whether they are steel construction or steel underframe or steel center beams.

A. Yes.

Q. But it does not in any way reflect other improvements than those?

A. No.

Q. Now, when cars go in for repairs they do not necessarily have these other improvements added to them?

A. Not necessarily.

Q. Some of them may and some of them may not?

A. Yes.

Q. You don't mean to testify these earlier cars of 1911 and 1913, that all of them when they have gone into the shops they come out with the improvements shown in the later designs?

A. Not in all cases, no.

Mr. Strouss: This interchange, as we said, I want to [fol. 112] check that testimony. I think that Mr. Leriche is probably wrong as to the rule of interchange as to wooden underframe cars.

Q. Isn't there a rule with respect to wooden underframe cars, as to their position in the train? In other words, are they classed as a rear end car, when a wooden underframe car shows up?

A. Well, it is my understanding that a wooden car cannot be used in interchange.

Q. Getting away from interchange for a minute, I mean in the operation of your road, in making up freight trains, do you know what the rules are as to the construction of the freight train?

A. Yes.

Q. So far as the position of the car in the train is concerned?

A. It is generally understood that a wooden car should be placed in the rear, yes.

Q. There is a rule of the company of that sort?

A. I believe there is, yes.

Mr. Strouss: I think that is all the cross-examination now. I want to check over this exhibit a little further.

Mr. Mason: I had planned to have the witness return to San Francisco, Mr. Strouss. Did you desire to cross-examine him any further?

[fol. 113] Mr. Strouss: Well, I wanted time to examine the exhibits.

Mr. Mason: Well, we will ask Mr. Leriche to return if Mr. Strouss desires to examine him further after examining the exhibits and the testimony.

The Court: Call your next witness.

Mr. Mason: We will call Mr. Russell.

FRANK E. RUSSELL, called as a witness on behalf of the defendant, being first duly sworn was examined and testified as follows:

Direct examination.

By Mr. Mason:

Q. Please state your name and residence, Mr. Russell.

A. Frank E. Russell, I reside at 2105 Eagle Avenue, Alameda, California.

Q. What is your official position with the Southern Pacific?

A. Mechanical engineer.

Q. In what department?

A. Motive power department.

Q. Is that the department with which Mr. Leriche is connected and which has charge of the maintenance and construction of rolling equipment?

A. That is correct.

[Vol. 114] Q. Now, what is your particular function as a mechanical engineer?

A. To supervise and advise in connection with the design, the repair of the equipment and rolling stock, locomotives.

Q. Do you deal particularly with the Company's locomotives?

A. At the present time, for the past few years, I have dealt considerably with the locomotive design.

Q. How long have you been in the railroad service, Mr. Russell?

A. I commenced work for the Company in September, 1899.

Q. Have you been at all of the times since then in the motive power department?

A. Yes.

Q. And principally connected with the design and handling of locomotives?

A. Just a minute, I said all that time I was in the motive power department. As a matter of fact, I was a few months transferred to the store department, but that was only a few months. All the rest of the time I have been in the motive power department. I was promoted to lead locomotive draftsman in 1903 and to Chief Locomotive Draftsman in [fol. 115] 1906, and to Assistant Mechanical Engineer in 1917, and at that time I had charge of the design of both freight cars, passenger cars, steamers and locomotives. And in 1924 I was made Mechanical Engineer and a few years later they started, or rather created the position as engineer of car construction in our department and that relieved me of the particular work in connection with passenger and freight cars.

Q. So that now and since that time your work is principally concerned with locomotives?

A. That is right.

Q. With their design and repair?

A. That is right.

Q. Does the motive power department maintain records showing the details of the design and construction of locomotives which the Company has owned and now owns?

A. They do.

Q. Are those records accessible to you?

A. Yes.

Q. And are they in the department or in the branch of the work of which you have charge?

A. Yes, they are all in the motive power department.

Q. Have you prepared certain exhibits from the records, [fol. 116] or had prepared for you certain records from the motive power department?

A. I have.

Q. With relation to the locomotives?

A. Yes.

Q. I'll ask you first to direct your attention to the statement entitled "Chronology of Freight Locomotives, Pacific Lines, years 1899 to 1940, Showing Improved Design and Increased Tractive Effort." Have you that exhibit before you?

A. I have.

Mr. Mason: I'll ask that that be marked 5 for identification.

Q. Is this one of the exhibits prepared by you in the manner you have just described?

A. It is.

Q. Are you personally familiar with all the details upon this exhibit?

A. I am.

Q. Will you state whether or not the representations appearing thereon are a correct representation of the records from which the exhibit is taken?

A. It is.

Mr. Mason: Have you some questions now, Mr. Strouss, before I offer it?

Mr. Strouss: No, I have no objection.

[fol. 117] Mr. Mason: I offer the exhibit as No. 5.

The Clerk: Defendant's Exhibit 5 in evidence.

Mr. Mason:

Q. Now, referring first to the left-hand side of the exhibit under the word "type", does that indicate the name and classification of the locomotive referred to.

A. At the extreme left-hand, under the title "type" is the usual name affixed to that particular type of locomotive.

Q. And then what is the significance of "Wheel Arrangement, Whyte System"?

A. The Whyte system was adopted generally and used generally by the railroads as a classification of locomotives and refers simply to the wheel arrangement. The name does not necessarily designate the particular type. In other words, one road may call a locomotive with a certain wheel arrangement a certain name that is more or less associated with the particular railroad, and some other railroad apply a name to the same wheel arrangement that it associates with its railroad, so that it got to a point where a name did not mean much. So then they adopted this Whyte system of classification that definitely designates the certain wheel arrangement of the locomotive, so that if you say 2-10-2 or 2-8-0, you know positively what is meant. For [fol. 118] instance, on this exhibit we show here under the type, the 2-10-2. Well, the Santa Fe Company calls that the Santa Fe type. Some other road may call it some other name.

Q. We call it sometimes the F type?

A. Sometimes we call it the F type.

Q. You speak of the White arrangement. That is spelled W-H-Y-T-E as shown on that exhibit?

A. That is right.

Q. Because of the name of the man who invented it?

A. That is correct.

Q. When you speak of the 2-8-0, what does the 2 indicate?

A. The 2 refers to the number of truck wheels.

Q. Those are immediately behind the pilot?

A. The leading truck wheels, and the next number designates the number of the driving wheels, and the next number denotes the number of trailing wheels, if any.

Q. Those are the wheels that roll under the cab?

A. Under the cab.

Q. And these numbers have nothing to do with the wheel arrangement of the wheels on the tender at all, do they?

[fol. 119] A. No.

Q. They don't relate to the tender at all, do they?

A. They don't relate to the tender at all.

Q. Proceeding further on the exhibit, what do the black lines indicate underneath each separate drawing of locomotive?

A. The black lines under the diagrams of the locomotive graphically and to scale represent the tractive power. The figure above the line indicates the value of this line in pounds of tractive power.

Q. What is tractive power?

A. Tractive power is the effort that the locomotive exerts at the rim of the driving tire on the rail to move itself forward or backward, as the case may be.

Q. And is relative tractive effort a fair measure of the amount of power that the locomotive will develop for the movement of traffic?

A. That is the customary designation of the power that is developed to move traffic, but it also includes, of course, power that is necessary to move the locomotive itself.

Q. Now, going down to the foot of the exhibit I notice you refer to articulated consolidation 4-8-8-2 and 2-8-8-4, [fol. 120] and they are further subdivided as AC-8 and AC-9. Are those types now actually in service?

A. They are.

Q. Are those the types of locomotives most recently purchased for freight service?

A. That is correct. The AC-8 is on our lines in California and the AC-9 on our lines in Texas at the present time.

Q. Just where does the AC-9 operate at the present time?

A. Between El Paso and Tucumcari, New Mexico.

Q. Going to the tabulation on the right-hand side of the sheet, I notice you show there in addition to the word "type", the word "class". Is that still a different means by which locomotives may be designated?

A. Yes, the class there is our common class we use on our drawings and specifications and time tables, and is designated that way for brevity.

Q. Does it have any relation by initial?

A. To the type, yes.

Q. For instance, "M" stands for "Mogul"?

A. M stands for Mogul and "4" is the fourth design of Mogul.

Q. And "MK"?

A. Mikado.

[fol. 121] Q. "AC" means Articulated Consolidation?

A. Yes, that is right.

Q. On the column "Year put in service", is that the year when the M-4's were put in service?

A. That is correct, yes, the years 1899 up to including the year 1901.

Q. Under the heading "Number Purchased", does that mean the number of M-4's purchased?

A. During that period, that is the sum total.

Q. That does not mean necessarily that there are 103 of those M-4's now in service, does it?

A. No, but it means that there were 103 locomotives of that type placed in service during those years.

Q. When you go to the column "Average Price", of course, I think that is self-explanatory. "Tractive Effort, Lbs.", is that an average of the group of each of that number?

A. Each one of the locomotives would develop a tractive effort of 28,710 pounds.

Q. There is no variation?

A. No, not to speak of.

Q. Now, here you have the 2-10-2, I notice there are two classes there, F-4 and F-5, is that 84,000 figure a more or less average?

A. No, those are two types of locomotives. In other [fol. 122] words, one is a little older edition than the other, and powers are the same, but there are certain improvements and changes in design that are incorporated in the later locomotives that are not incorporated in the first, and the new number of classification is given simply for record purposes.

Q. I notice under "tender capacity" you have a column "oil gals." and "water gals."; are all of these types shown on exhibit No. 5 oil-burning locomotives.

A. They are with the exception of the AC-9's referred to.

Q. And that is a coal burner?

A. That is a coal burner.

Q. So the figure there refers to the ton-capacity of the coal?

A. The ton-capacity of the coal.

Mr. Mason: Before we pass from the exhibit, have you any questions that you would like to ask at this time, Mr. Strouss?

Mr. Strouss: Just one question I want to ask here.

Q. Going back to this tractive effort, did I understand you to say that was the power developed to move traffic?

A. It is the power or effort that is developed at the rim [fol. 123] of the driving wheel against the rail to move the locomotive and cars forward.

Q. It includes, of course, or of course there is included in that the weight of the locomotive?

A. Oh yes; the resistance. In other words, in order to get the exertion available to haul the train you must deduct the resistance or the effort that is necessary to move the locomotive itself. In other words, it gets back to what is referred to as draw bar pull. The draw bar pull might be referred to as the net tractive effort. That is what you have got left.

Q. In other words, taking the tractive effort that is shown here and deducting from that the effort necessary to —

A. Move the engine and the tender.

Q. —move the engine and tender would give you the draw bar pull?

A. That would give you the draw bar pull, yes.

Q. And what is that?

A. That means the net effort to haul a train. You also get into the frictional resistance of the locomotive and such like. That is generally in use, and they always refer to it for comparative purposes by tractive power.

Q. Of course, there is a considerable difference in the [fol. 124] weight of these locomotives?

A. Yes.

Q. So that there would be a greater part of that tractive effort required to move the articulated consolidation, for example, than would be required to move Southern Pacific type?

A. That is true when you take the type as a whole, but when you come to comparing the weight of that tractive power on a pound basis, etc., you might find the AC-9 would exert a greater tractive effort per 1,000 pounds of weight than some other engine. I don't say that is the fact here.

Q. Yes, I understand you say it might be?

A. It might be. I know some of the types, for instance, comparing our more modern types with the earlier types, that is a fact.

Mr. Mason:

Q. It is generally true, is it not, Mr. Russell, that these larger locomotives will develop more power per pound by weight than the smaller and the older type?

A. That is true, and our modern tenders hold more water per 1,000 pounds of weight than old earlier types.

Q. I want to ask you this, Mr. Russell, the locomotives shown on exhibit No. 5 are those which have been used or [fol. 125] which are presently being used by the Southern Pacific lines generally, are they not? By that I mean the lines west of Tucumcari and Ogden.

A. Yes.

Q. And include types which have been and are currently being used in this territory east of Indio, California, and El Paso, Texas?

A. Yes.

Q. I notice there is a star on this exhibit, indicating two of the types have booster equipment. Will you explain what the booster is, what it does?

A. That is correct. The 2-10-2's here shown as the Southern Pacific type are both equipped with boosters. A booster is a small reciprocating steam engine that is car-

ried on the trailing truck and geared to the trailing axle so that it can be cut in or cut out and the trailing axle used to develop tractive power, and that roughly gives an additional tractive power of about the equivalent of one extra driver in starting the train. It is like starting out your automobile in low gear. It gives you increased starting power, and when you get it up to about 10 or 12 miles per hour, the engineer throws the latch and the gear automatically cuts out and is no longer used until again required.

Q. By the trailing axle you mean the axle of the truck [fol. 126] under the cab?

A. Yes.

Q. And the booster is just a little auxiliary helper which may be cut in in starting?

A. That is right.

Q. To give additional effort?

A. Yes.

Mr. Strouss:

Q. It is only used in starting?

A. Yes, it should only be used in starting. It is not effective at high speeds. When you get up to 10 or 15 miles an hour it is not effective and should be cut out.

Mr. Mason: Will you now pass to the state, this statement. I shall read the title and ask that it be marked for identification No. 6—the statement entitled “Chronology of Passenger Locomotives, Pacific Lines, Years 1895 to 1940, Showing Improved Design and Increased Tractive Effort.” Did you prepare this statement?

A. I had it prepared under my supervision.

Q. Was that prepared from the records under your immediate supervision in the office of the motive power department?

A. It was.

Q. Are you familiar with all the details of this exhibit?

[fol. 127]. A. I am.

Q. Will you state whether it correctly reflects the information shown on the original records in your possession?

A. It does.

Q. And you believe it to be true and correct?

A. I do.

Q. This exhibit, if I understand it correctly, is a showing of the history of the passenger locomotive development somewhat similar to the development of the freight locomotive development shown on exhibit 5?

A. Yes.

Mr. Mason: I am about to offer the exhibit, Mr. Strouss. Have you any questions?

Mr. Strouss: Q. This "Golden State 4" is that an engine actually in existence?

A. Well, it is almost in existence. In other words, it is being built. I just came from there, from the plant.

The Court: Q. It is on order?

A. It is on order, and I have been engaged in getting it assembled. There is a bunch of them on order now and they are actually in the process of being built. Some of the boilers have been built.

Mr. Mason: Q. Is the GS-4 closely similar to any other [fol. 128] type now presently in use?

A. Yes, sir, it is very similar to the GS-3 now in service between San Francisco and Los Angeles.

Q. And it presents much the same appearance as the GS-3?

A. Much the same.

Q. The GS-3 is not shown on the exhibit, of course.

A. No.

Q. Is there any distinctive coloration of the GS-3 and the GS-4?

A. Yes, there is a distinctive color, and they are a streamline job—semi-stream lined.

Q. Are they the locomotives that operate on the daily trains between Los Angeles and San Francisco?

A. Yes, that is correct.

Q. That has the red and yellow color?

A. That is correct.

Q. Have these locomotives been used in freight service to any extent, if you know?

A. They are used in both freight and passenger service between Los Angeles and San Francisco.

Mr. Strouss: Q. On the "Hot Shots?"

A. Yes.

Mr. Mason: Q. They are the locomotives pictured in the [fol. 129] article in the current Saturday Evening Post; are they not?

A. That is correct.

Q. Being used on the overnight trains?

A. That is correct.

Q. And do you believe the GS-4 is very closely similar to the GS-3?

A. Very similar.

Q. Was there any particular reason for showing the GS-4 here instead of the GS-3?

A. The particular reason was, it simply illustrated the last power, the last development. The GS-4 is a little more powerful than the GS-3, so to bring the exhibit up to the last minute, we showed the GS-4.

Q. His honor referred to the fact that these are on order, to use the phrase that has become currently popular recently. Are these locomotives to be distinguished from some other locomotives which are on order in that they are in the process of manufacture and surely to be delivered.

A. That is correct.

Q. Is there any particular feature of this exhibit to which you wish to call attention as distinguished from Exhibit No. 6, are there, Mr. Russell?

[fol. 130] A. I don't think there is anything in particular. There are certain other locomotives, for instance the Mountain, the Golden State, and both as to the GS-3 and the GS-4, they are shown as equipped with boosters. You will notice in the tabulation there is also an additional reference marked opposite the Golden State which says that the "price and weight of these locomotives estimated but added here for comparative purposes."

Q. Price and weight, not freight?

A. Weight, yes, prices and weight, which are not actual, they are estimated.

Q. I think you indicated that the GS type locomotives are also used in freight service. Is it possible to use the Mountain type locomotive in freight service?

A. Yes, they are used in freight service.

Q. They have been and are used to considerable extent, are they not?

A. Yes.

Q. Is it possible to use the Pacific type of locomotive in freight service?

A. It is possible but not ordinarily advantageous because it is too light to have sufficient power.

Q. But they have been used?

A. They can be used. They can be used. It is simply [fol. 131] a question of the amount of tonnage you have to haul.

Q. There are other Mountain types other than the Mt-1?

A. Oh yes.

Q. That is shown as the example of the Mt. type?

A. That is the Mt-1, but not shown here are the engines built from 1923 to 1929. In later years there were additional classes built very similar but still slightly different from these.

Q. Some slight difference in arrangement?

A. Some slight difference in arrangement.

Q. Also booster-equipped?

A. Also booster-equipped.

Q. The variation, if any, would be in the boiler, the driver, or inside or some other mechanical differences there?

A. The boiler, driver or mechanical construction.

Q. Mr. Russell, are these locomotives or any of them equipped with other devices besides these boosters which tend to lessen fuel consumption or increase their efficiency? If so, what are they?

A. Yes, they have a great many other devices, particularly so on a modern engine. They are getting more and more devices than were formerly applied to locomotives, [fol. 132] such as super-heaters, safety valves, injectors, feed water heater equipment, brakes, and steam gauges, and a great many devices that are used in the actual operation of the locomotive, that are, as we commonly refer to them, specialities that we buy from the manufacturer who manufactures and develops that particular device.

Q. You speak of brakes, what have you in mind when you speak of improved brakes.

A. Well, there has been a great deal of improvement made in the brakes, both as to the foundation brakes and the operative mechanism.

Q. Do these later types of locomotives have any greater capacities in the air reservoirs?

A. Yes, they have greater air capacity in the reservoirs and they have a higher percentage of braking power as a rule.

Q. Do they maintain any higher pressures in the air reservoirs than was formerly the rule?

A. Yes.

Q. What air pressures are now maintained in the air reservoirs in the modern locomotives?

A. 180 to 200 pounds.

Q. How is the air pressure built up in these air reservoirs?

A. They are built up by the air compressors and controlled by the governors. You can set the governors to any particular pressure you desire on the line.

Q. When the pressure falls, does the governor operate?

A. Yes, when the pressure falls the governor operates.

Q. Then what happens to the air pumps?

A. The air pumps begin to operate, and when the pressure is built up to the proper pressure, the air pump cuts out.

Q. Are there any changes in design of these air pumps or any increase in their capacity?

A. Yes, both as to capacity and efficiency.

Q. Did these earlier types of locomotives, the 10-wheelers and Moguls, have single or double air pumps?

A. They had small pumps, the old Westinghouse pump of small capacity, and they had only one type.

Q. What have you to say in regard to the modern pumps?

A. The modern types of locomotives are equipped with an air pump which has a much higher capacity.

Q. What is the function and character of the superheater.

A. Well, the superheater is a device that is placed in the [fol. 134] boiler, that is, I would say in the flue of the boiler so that when the steam leaves the boiler on the way to the cylinders it passes through the superheater. After the steam has been separated from the water in the boiler, it is increased in temperature, and in the modern engines this temperature is up to as high as 700 degrees, 750, which very materially increases the efficiency and power of the locomotive, especially at high speed. With the old saturated engine, as long as steam was in contact or closely associated with water, there is a definite relation between

temperature and pressure. In other words, if you know the temperature you can determine the pressure or if you know the pressure you can determine the temperature. But when you separate water and steam and then apply heat you increase the temperature of the steam which will either increase the volume of the steam or increase the pressure.

Q. That is under Boyle's law, isn't it?

A. Yes.

Q. Boyle's law is simply applied by means of the super-heater to give you more efficiency in the use of your steam?

A. More efficiency in the use of your steam, and you get a greater amount of power out of a given amount of [fol. 135] water.

Q. What is the function of the feed water heater?

The feed water heater is a device that is applied to the locomotive to divert a part of the exhaust gases after they have been used in the cylinders expansively to heat the feed water on its way to the boiler and in that way to recapture or save some of the heating units for use, which would be lost otherwise, and put them back in the boiler. It serves in two ways: first of all, it gives you slightly increased power, saves in fuel, saves in water and actually reduces the back pressure between the nozzle and the cylinders, establishing higher differentials which results in increased power.

Q. Does the engineer in operating these locomotives have to rely on main strength to move his controls or does he have assistance?

A. Oh, no, he doesn't have much to do nowadays.

Q. What is the nature of his duties?

A. Well, on the modern locomotive, they have the power reverse gear, for instance. All he had to do is to operate the small lever and that in turn operates the reverse mechanism by steam or air power; that is, air power is ordinarily used, but in case of emergencies steam is used. [fol. 136] Q. Is there any heavy labor upon the fireman in order to get the fuel in the firebox?

A. No, he doesn't have to do any more than the engineer does. All he has to do is to operate the feed water equipment, the injector and the oil regulator handle and occasionally adjust his dampers.

Q. And the oil regulator handle enables him to draw the fuel from the tender?

A. Controls the supply of fuel from the tender to the locomotive burner.

Q. I notice this AC-9 is a coal burner. Is there any labor imposed on a fireman thereon to get the fuel into the firebox?

A. No, he doesn't have a great deal to do. The locomotive is equipped with a stoker, a coal stoker.

Q. How does the coal stoker function?

A. Your coal stoker operates to take the coal from the tender and distribute it in the firebox. All he has to do is operate the necessary control and occasionally look in the firebox to see if the fire is burning properly. If not, then he has to adjust his coal and balance up the fire or throw more coal on the fire.

Q. Are there locomotives in use by the company in Arizona or New Mexico which use coal instead of oil?

[fol. 137] A. Yes, we have some locomotives, I don't remember just how many, but we have a number of locomotives, not a great many.

Q. They are of the F type, are they not?

A. I believe they are all of the F type now, although there were a few Mountain type.

Q. Are those equipped with stokers?

A. Yes.

Q. All the coal-burning locomotives in the main line service are equipped with stokers, are they not?

A. I believe that question may be a little bit broad. In general, that is true, but there might be some few of the small ones that have not yet been equipped.

Q. I am speaking of locomotives in main line service.

A. Generally in main line service it is true, but still they might run a small locomotive out on the main line. But all the large locomotives are equipped with stokers.

The Court:

Q. Are most of them oil burners?

[fol. 138] A. The great majority of them are oil burners. We only have a few old coal burners. I might add in this AC-9 class of locomotives and the F. class are also equipped with coal pushers, pushers that are controlled by the fireman, so that he can push the coal down off of the sloping coal sheets into place so that the stoker will deliver the coal properly to the fire box.

Q. Referring to these AC-8's and AC-9's, I notice these AC-8's were acquired in 1939, twenty-eight of them at an average price of \$183,000. Have you been asked to make an estimate of the cost of acquiring twenty-five more or less engines of the AC-8 type as of 1940?

A. I have.

Q. Have you made such an estimate?

A. I did.

Q. What is the result of that estimate as to the individual cost?

A. We estimate that they would cost \$188,000.

Q. That is an increase of approximately \$5,000 over the 1939 figure, is that correct?

A. Yes, that is about correct.

Q. Of a similar type of locomotive?

A. That is correct.

Mr. Mason: Was Number 6 offered and received?

[fol. 139] The Court: I think not.

Mr. Mason: If not, I would now like to make a formal offer.

The Clerk: Defendant's Exhibit 6.

Mr. Strauss: I have some questions. I have just one or two I will ask him.

Q. What you testified to, Mr. Russell, concerning the use of boosters on freight trains and the tractive effort and drawbar pull of freight locomotives would apply also to passenger locomotives.

A. That is correct.

Mr. Mason: I will ask that this be marked for identification Exhibit 7.

Q. I will call your attention, Mr. Russell, to the statement which has just been marked by the Clerk Number 7 for identification, entitled "Locomotives purchased or built in company shops, years 1922 to 1940." Will you state whether this exhibit was prepared by you or under your direction?

A. It was prepared under my direction.

Q. Likewise from records in the motive power department in San Francisco?

A. That is correct.

Q. And this undertakes to show, does it, the locomotives of the various types of wheel classification and engine numbers, number of units purchased and the price paid for [fol. 140] each, etc.?

A. It does.

Q. And the type of service to which they are assigned or could be assigned?

A. Yes.

Q. It shows here on the righthand side "Trust Series (k.)" What does that mean?

A. That is the designation of the trust series under which these locomotives were bought and paid for. In other words, it refers to a trust agreement. In other words, where the company had borrowed money to purchase equipment.

Mr. Booth:

Q. Equipment trust.

A. Equipment trust is correct. That is more nearly the proper designation.

Mr. Mason:

Q. Are those issues of equipment trust obligations by the company whereby it obtained the money to buy these locomotives, or a part of the money?

A. Yes, as I understand, they apply to the Interstate Commerce Commission and get authority or permission to borrow the money to purchase, and they negotiate these trust agreements.

Q. Now, do you understand that these equipment trust obligations were so issued by an application to the Interstate Commerce Commission?

[fol. 141] A. Yes, they were so issued because we have to apply the trust plates bearing these designations onto the equipment at the time they are built, and they have to be maintained.

Q. I don't know that, I made by question quite clear, but do I understand the company did actually apply to the Interstate Commerce Commission in order to obtain the money, if you know?

A. I am not in a position to say of my own knowledge, but I understand that is the case.

Mr. Strauss: I ask what he understands be stricken.
The Court: It may be stricken.

Mr. Mason:

Q. Your records show, in any event, the information shown under column K, Trust Series, is that correct?

A. That is correct.

Q. Is all of this other information taken from your own records?

A. It is.

Mr. Mason: If I haven't done so previously, your Honor, I now offer this exhibit as Defendant's Exhibit Number 7.

The Court: It may be admitted in evidence.

The Clerk: Defendant's Exhibit 7 in evidence.

Mr. Mason:

Q. Mr. Russell, I notice that this exhibit contains entries [fol. 142] for nearly every year between 1922 and 1940;—of course, the years between 1931 and 1937 are omitted—whereas the preceding exhibits, Numbers 5 and 6, do not cover each separate year in the same fashion. Do I understand that Exhibit 7 shows all of the purchases made during the period represented on the exhibit?

A. That is correct.

Q. Is it correct to say that the showing on Numbers 5 and 6 is representative of the types purchased and in service over these successive years?

A. Exhibits 5 and 6 show typical representative types for periods, covering the periods.

Q. In other words, Mr. Russell, during a six-year period there from 1931 to 1937 there were no locomotives whatever purchased.

A. That is correct; and the exhibit 7 shows all the locomotives purchased or built during the period shown.

Q. Is it necessarily the fact that all these locomotives are in service now?

A. No, not necessarily. This simply shows the number of locomotives and the information in connection with them as of the date they were built and placed in service. Some of the other types have been sold or broken up, or dis-[fol. 143] mantled, or wrecked, or are not being serviced at the present time.

Q. I notice there an entry on line 45 of Exhibit 7, "1940" and it is starred and a reference to the 4-8-4 class. Are those twenty locomotives the same ones which are shown in the last entry in that block, Exhibit Number 6?

A. That is correct.

Q. And those are the locomotives the delivery of which is to commence during the remainder of the present year?

A. That is correct.

Mr. Mason: I think that is all that I have now, Mr. Russell. Now I am perfectly willing, in fact, I would like to agree with counsel, that his examination be deferred, and the witness may return to Tucson for that purpose at some time convenient to you, Mr. Strouss.

Mr. Strouss: That is all right.

Mr. Mason: We would like to arrange a definite date, not necessarily now, because Mr. Russell has the job of getting GS-4's in our service as soon as possible.

Mr. Strouss: I understand you want to start with other witnesses Monday.

Mr. Mason: Yes, we do.

Mr. Strouss: There is one question I would like to ask Mr. [fol. 144] Leriche which I forgot.

Mr. Mason: We will have Mr. Leriche resume the stand for that purpose. May we have Mr. Russell withdrawn for the time being, your Honor?

The Court: Yes.

C. C. LERICHE, a witness called for the defendant, resumed the stand and testified further as follows:

Cross-examination (continued).

By Mr. Strouss:

Q. I forgot about passenger car development here, Mr. Leriche. These coaches, the cars shown as designed in 1937 and 1939 on Exhibit 4, you don't mean to testify that they are the type of coach or car that is in service now exclusively?

A. Oh, no.

Q. It just represents the design of that year and there may be some of them of that type in service?

A. Yes, we have some of both those types in service.

I wish to make a correction here. I think I was asked by Mr. Mason where these cars, in what service they were in, and I think I said between San Francisco and Los Angeles. That is true, but they are also in service on the Overland Route.

[fol. 145] Q. Now, of course, some of these earlier cars are still in service?

A. Oh, yes.

Q. What is the earliest design that would still be in service?

A. Well, I would say the earliest design in service would be the steel coach, all steel coaches.

Mr. Strouss: I think that is all.

Re-direct examination.

By Mr. Mason:

Q. Mr. Lerich, isn't it also true that some of these articulated units of late design, either of Southern Pacific or other ownership, or of this 1937 design, are in service across Arizona?

A. Yes.

Q. In 43 and 44?

A. Yes.

Q. And perhaps on other trains as well?

A. Yes, that is right.

Mr. Mason: Now, subject to our agreement that these gentlemen will return at your convenience, we are ready to recess.

The Court: Very well.

Whereupon a recess was taken until Monday, November 25, 1940, at 10:00 o'clock A. M.

[fol. 146] Monday, November 25th, 1940. 10:00 A. M.

All parties being present as heretofore noted, proceedings were resumed as follows:

The Court: You may proceed, gentlemen. I believe you had finished with the witness on the stand.

Mr. Mason: Yes. Your honor, we have obtained from the Interstate Commerce Commission and now offer in

evidence, it is the certificate of the Commission accompanied by certain documents, which will be the form of two separate exhibits. The first exhibit which we will ask to be numbered—

The Clerk: Defendant's Exhibit 8 for identification.

Mr. Mason: —8 for identification, we are going to offer it in evidence as soon as I have described it. I might say copies of the documents, not of the certificate, have been furnished to the opposing counsel.

This is a certificate of the secretary of the Interstate Commerce Commission, stating that there are attached to the certificate two copies of the following:

Classification of Investment in Road and Equipment of Steam Roads, prescribed by the Interstate Commerce Commission, issue of 1914; Orders of the Commission—I am not reading this verbatim but in substance—entered July 25, [fol. 147] 1935, June 13, 1934, January 16, 1935, December 27, 1935, December 6, 1939, January 31, 1940; Classification of Operating Revenues and Operating Expenses of Steam Roads prescribed by the Interstate Commerce Commission, issue of 1914; and Orders of the Commission entered July 25, 1925, April 18, 1928, November 23, 1928, January 17, 1940; Condensed Classification of Operating Expense of Steam Roads Prescribed by the Interstate Commerce Commission, First Revised Issue; Condensed Classification of Income, Profit and Loss and General Balance Sheet Accounts for Steam Roads prescribed by the Interstate Commerce Commission, issue of 1914; and orders of the Commission entered December 20, 1920, March 14, 1921, August 19, 1921, December 18, 1933, May 28, 1935, April 12, 1937, May 9, 1938, March 8, 1940; Classification of Train-miles, locomotive-miles and car-miles for Steam Roads prescribed by the Interstate Commerce Commission, issue of 1914; and Order of the Commission entered December 7, 1935, Accounting Bulletin No. 15, Interpretations of Accounting Classifications prescribed by the Interstate Commerce Commission for Steam Roads; an Order of the Commission entered November 15, 1929, January 27, 1938, January 17, 1940; and Regulations to cover Destruction of Records of [fol. 148] Steam Roads prescribed by the Interstate Commerce Commission, Revised Issue of 1938.

The certificate continuing: "The originals of which are now on file and of record in the office of said Commission."

And the certificate concludes with the testimonium and the signature of W. T. Bartell, Secretary of the Interstate Commerce Commission, affixed on November 8, 1940, with the seal of the Commission.

The Court: You are now offering this in evidence?

Mr. Mason: I am offering that particular certificate with the documents annexed thereto and bound and covered by the seal of the certificate, as Defendant's Exhibit No. 8.

The Court: Any objection, gentlemen?

Mr. Strauss: We have no objection.

The Court: The exhibit may be admitted in evidence.

Mr. Mason: Your honor, I ask that there be marked as Defendant's Exhibit No. 9, a certificate with certain accompanying documents, which I shall describe by reading the certificate in the same manner, as No. 8: The certificate of the Secretary of the Interstate Commerce Commission upon the letter-head of the Interstate Commerce Commission reads as follows, in substance: "I, W. T. Bartell, Secretary of the Interstate Commerce Commission, do hereby certify that the attached are true copies of the following:

Order of the Commission entered December 10, 1938; Rules governing Monthly Reports of Railway Expense, 1932 Revision; Order of the Commission entered October 24, 1935, June 8, 1936, October 30, 1936, January 28, 1939; Form T; Monthly Report of Railway Expense, 1936 Revision, Supplement to Form T; Monthly Report of Expense for Public Highway Grade Crossings, 1939 Revision. Form V; Monthly Report of Railway Expense, 1940 Revision, Form R, Monthly Report of Railway Expense, Form F, Monthly Report of Railway Expense, Substance Fatalities; Order of the Commission entered May 29, 1940 and November 10, 1937; Order of the Commission entered November 25, no year specified, exclusive of forms made a part thereof; Order of the Commission entered November 10, 1937; Circular dated June 19, 1936, addressed to the Chief Accounting Officers of all Class 1 Steam Railways; Orders of the Commission entered November 16, 1939, November 22, 1927, December 14, 1938, April 10, 1933, July 17, 1940 and January 13, 1940, the originals of which are now on [fol. 150] file and of record in the office of said Commission. Following which is the affixed signature of the secretary

and the seal of the Commission as of the 9th day of November, A. D., 1940.

We now offer the certificate with the accompanying orders and other material attached thereto and covered by the seal as Defendant's Exhibit No. 9.

The Court: Any objection?

Mr. Strauss: No objection.

The Court: The documents marked may be admitted in evidence.

The Clerk: Defendant's Exhibit 9 in evidence.

Mr. Mason: We will now call Mr. Porter, Leroy V. Porter.

LEROY V. PORTER called as a witness on behalf of the defendant, having been first duly sworn, was examined and testified as follows:

Direct examination:

By Mr. Mason:

Q. Will you please state your name and residence, Mr. Porter.

A. Leroy V. Porter, residence Bronxville, New York.

Q. Where do you maintain your official headquarters?

A. New York City.

[fol. 151] Q. By whom are you employed?

A. New York Central Railroad Company.

Q. In what capacity?

A. Assistant Vice-President and Comptroller.

Q. What has been your experience in railroad service?

A. I have been connected with the New York Central for 44 years, starting as a railroad agent, travelling auditor, clerk in the auditor's office, Chief Clerk to the Vice-President in charge of accounting, Assistant Comptroller, Comptroller, and Assistant Vice-President and Comptroller.

Q. Now, as Assistant Vice-President and Comptroller, Mr. Porter, what particular subdivision of the work of the railroad comes under your supervision or direction?

A. Accounting, all of the accounting.

Q. All accounting of the New York Central Railroad Company?

A. All the accounting of the New York Central Railroad Company.

Q. Does that include its affiliates and leased lines?

A. Yes, sir.

Q. Mr. Porter, I show you a document which purports to be a map, which I will now ask be marked for identification [fol. 152] as defendant's exhibit—

The Clerk: Defendant's Exhibit No. 10.

Mr. Mason:

Q. Will you state generally what railroad lines that map covers?

A. This map shows the New York Central system. It does not show all of the connecting lines, but does show the territory covered by the entire New York Central Railroad.

Q. Is that the system and the group of lines whose accounts are subject to your jurisdiction?

A. Yes, sir.

Q. I understand that explanations of certain details of the map will be made by a later witness at the time it is offered?

A. Yes, particularly with respect to the heavy black line.

Q. Mr. Porter, I show you a document consisting of one sheet, headed, The New York Central Railroad Company, Including all Leased Lines, Freight Operating and Freight Transportation Expenses, Related to Traffic, Calendar Years 1922 to 1939. Do you have that document before you?

A. I have.

Mr. Mason: Has that been handed to the clerk?

The Clerk: Defendant's Exhibit 11 for identification.

[fol. 153] Mr. Mason: Will you state whether or not the document marked defendant's exhibit No. 11 for identification was prepared by you or under your supervision?

A. Yes, sir, it was prepared under my supervision.

Q. And are the sources as indicated on the face of the exhibit?

A. The sources are from the annual reports to the Interstate Commerce Commission.

Q. Are those reports regularly rendered by the New York Central Railroad Company on behalf of itself and its leased lines to the Interstate Commerce Commission?

A. Yes, sir.

Q. In accordance with the Interstate Commerce Commission orders and requirements?

A. Yes, sir.

Q. Are you familiar with those requirements?

A. Yes, sir.

Q. Are all of the figures shown hereon, either taken directly from those reports or computed from *from* figures taken from those reports?

A. Yes.

Q. Now, as to certain of the figures shown hereon, I take [fol. 154] it they are computations rather than shown on the face of the report?

A. Well, the averages are computations.

Q. And the totals for the three-year period shown at the end of the sheet, are they computations, as well?

A. They are, that is the totals for the four-year periods.

Q. Yes, the four-year period, I should have said.

A. Yes.

Q. And the comparisons between the two four-years periods are computed?

A. Yes.

A. I take it the figures appearing in columns B, C and D are taken from the reports themselves without alterations?

A. That is right.

Q. Have you compared the exhibit with the original sources to determine whether it is correct?

A. It was prepared under my supervision, but I have not taken it and compared the figures for every year personally.

Q. Have you made a check to determine whether or not it is correct?

A. I have.

[fol. 155] Q. Will you state whether or not, to the best of your knowledge and belief, it is a true reflection of the original sources?

A. It is.

Mr. Mason: We now offer the exhibit in evidence as No. 10.

Mr. Strouss: We object to this exhibit as incompetent, irrelevant and immaterial, as we are not concerned with the operation of the New York Central. We are trying a case in Arizona.

The Court: What is the purpose of this?

Mr. Mason: Your honor, as it will appear from paragraph 3 of part 3 of the answer, we have alleged—I take it, by the way, that Mr. Strouss is not objecting to the competency but rather to its relevancy and materiality.

Mr. Strouss: I have a further objection that it is not the best evidence. The records themselves are the best evidence, and unless those are produced for the purpose of cross-examination, then the exhibit is inadmissible. But I also say that the evidence is inadmissible because there is no relation between operations in New York and operations here. We are trying the question of whether a law which applies to operations in Arizona is constitutional or not. [fol. 156] The operations of a railroad in New York certainly are not relevant or material to the issue here presented.

Mr. Mason: Your honor, I will call your attention to paragraph 3A of part 3 of the answer.

The Court: What page is that?

Mr. Mason: It is on page 5, and paragraph 3 continues on from page 5 through several pages.

“A” relates to the improvements in operating results generally throughout the United States, on railroad throughout the United States generally.

Paragraph 3 relates to the best modern railroad practice, and of course, the experience of the New York Central may be taken as typical of standard modern railroad practices.

On page 8 in paragraph D, reference is made to common standard railroad practice throughout the United States except in Arizona. In the same paragraph on page 8, reference is made to the long-train practice in the transportation of freight between all parts of the United States in trains of more than seventy cars. In the same paragraph reference is made to long-train operation in states other than Arizona by locomotives of modern type and the efficiency and economy of operation thereby obtained.

Paragraph E, on page 9, there it is stated that the operation [fol. 157] of freight trains containing substantially more than 70 cars is a general practice on the main trunk lines of all of the major steam railroads throughout the United States, except in Arizona; that the operation of these standard long trains is carried on under conditions substantially as favorable as in Arizona; that the results are favorable; that such freight train operations are carried

on commonly, safely and economically over lines substantially similar to the main lines of the defendant.

The Court: Well, Mr. Mason, on the first ground stated, the Court will overrule the objection.

Mr. Strouss: If the Court please, I apprehend this is going to come up, I can see, on all of these witnesses. We would like to be heard on the question of the admissibility of this evidence because we didn't think it is proper evidence.

The Court: I will vacate my ruling and hear you. You are confining yourself, Mr. Strouss, to the first ground as to its being incompetent, irrelevant and immaterial?

Mr. Strouss: Now, the fact, of course, that trains are operated in other states, long trains, where there is no law [fol. 158] which regulated those trains would not mean that a law which regulated those trains, and the train lengths, in this state, is invalid, nor would it be evidence of any invalidity. It is much like the little boy, who says when his parents get after him, that he did it because Johnny did it. Now, that is the argument which is made here, and it is no justification for the operation of trains in violation of law, or any argument that the law is unconstitutional. Now, certainly, there is no relevancy or materiality in this until, at least it is shown that the operating conditions are identical with those in that territory.

The Court: I am inclined to agree with you, probably not identical but similar.

Mr. Strouss: Well, the similarity must be such, under the cases, that it comes very close, pretty close to identical. We have a number of authorities which we will be glad to cite to your honor, that your honor may read, holding that it is a necessary requisite to the materiality, before the evidence becomes material. On the admissibility of evidence, that is one of the requisites that must be shown, that there is such a similarity, that it is almost identical. Of course, there has been no such showing here. In fact, I [fol. 159] think that if this witness were to be examined as to the train operations on the New York Central, you will not only find they have a double track over a good part of the system shown on this map, but probably a four-track operation on some parts of it, while your honor heard the testimony the other day, which is, that very little of the track in the State of Arizona is double track. Of course, there

is no showing as to grade conditions, the curves, the hog backs and dips, how they compare in the two territories, which would of course, affect the operation of trains and operating conditions. We have no evidence as to what the laws of New York are governing the operation of trains, such as the full-crew law, which in some states—there is no such a thing as a full crew law. Other states do have it, but they operate in different states. Now, of course, your honor, your honor can see that would affect the operating costs, because if one state requires a certain number of men in a crew and another state has no full-crew law, the less men required to operate a train is going to affect operating costs. So the evidence, which is here offered on operating expenses would be affected by laws of that sort. The length of divisions would have its effect upon operating [fol. 160] costs. Certainly, until these conditions are shown to be similar, or so nearly similar as to be practically identical, there could not be any evidentiary value to this testimony.

Mr. Polley has a number of cases. The case of *Morse vs. Kentucky Electric Co.*, 208 S. W. 15, was an action for the price of constructing an engine. Evidence that an engine such as the one in controversy would operate well, if properly constructed; by proving a similar engine in a different place did operate properly, was held inadmissible at least until there was a showing that the conditions surrounding the operation were similar or identical.

[fol. 161] Mr. Strouss: In the case of *Perkins vs. City of Springfield, Massachusetts*, 143 N. E. 329, was an action to recover damages for the establishment of a building line; evidence that the owners on another street had set back their buildings voluntarily was held inadmissible, not showing similarity.

Superior Loader Company vs. Huttig, etc. Missouri, 264 S. W. 396, was an action for the price of a machine shovel and evidence as to how a similar shovel had operated in other mines was held inadmissible.

A similar case was *Osborne vs. Eyster*, 192 S. W. 143.

In *Fort Worth & D. C. Ry. Co. vs. Strickland*, a Texas case, 208 S. W. 410, an action against a railroad for failure to furnish cars within a reasonable time after requested, evidence that another road did so furnish cars was held not admissible.

McLaughlin vs. L. A. Ry. Corp. 182 Pac. 44, evidence as to the distance within which a car of a railway company other than the defendant would stop held inadmissible.

Thayer vs. Glynn, 106 Atlantic, 834, the distance in which an automobile would stop was held inadmissible.

Evidence that ads had been run profitably in other cities [fol. 162] was held in Johnston Publishing Co. vs. Briggs, 76 Fe. (2nd) 601 as inadmissible.

Crouch against National (etc.) Remedy Co. 217 N. W. 577. Cretors vs. Troyer, 247 N. W. 558.

Puget Sound Co. vs. Packing Co. 136 Pac. 117 where the plaintiff claimed transportation of certain cars belonging to the defendant were dangerous owing to defective loading, evidence that another railroad transported such cars was held inadmissible.

There is quite a lengthy annotation in 66 A. L. R. at Page 1203.

Now it would seem quite apparent that that rule must be true because of all the different conditions that may affect railroad operations, unless those conditions exist in the case of the respective railroad whose evidence of operations is offered and that they are similar to the conditions which exist in the operation of the railroad whose case is before the court, there couldn't be any evidentiary value to the testimony. We say that is the situation here. I am talking now only to the point of cost of operation. I suppose that eventually the defense will question him about the matter of safety operations. Now certainly that would have a further [fol. 163] objection that there is—of course it would be opinion evidence upon which expert testimony is not admissible because it is the ultimate facts, and the facts themselves going to prove that ultimate facts are available and where such is the case opinion evidence is not admissible. In other words, these exhibits will show which have been introduced in evidence this morning, exhibits 7 and 8, under the requirements of the Interstate Commerce Commission are required to make reports of all accidents occurring on their railroad. I say all accidents, that is a little general because there is a limitation as to accidents in which the time off is three days or more and train accidents where the property damage is \$150 or more. That type of accident they are required to report to the I. C. C. and those reports are available, both in the I. C. C. and the company's records. They have a record of all their trains

operating, from which record can be determined the number of long and short trains, that is, trains of 70 cars or less or trains of 70 trains and over, and the accident reports related to those train lengths to show from the evidence all of the facts themselves whether there is a relation of safety in the regulation—

[fol. 164] Mr. Mason: I don't mean to interrupt counsel but he is certainly anticipating a great deal when he anticipates we are going to question Mr. Porter about safety operations. I qualified Mr. Porter as head of the Accounting Department of the New York Central. I have not so far indicated and I will say in order that counsel's apprehensions may be quieted, I don't intend to ask Mr. Porter anything about safety of operations on the New York Central, and in fact I didn't intend to ask him any questions about their operations at all, but merely to introduce exhibits through him which will reflect the results taken from their underlying records. If that will somewhat abate the anticipatory objection now being argued it may be for the benefit of both of us.

Mr. Strouss: I still insist upon my objection and in order that what I have said may not be wasted it will be unusual if the defense here does not in some of these executives of foreign roads question them upon the point of safety.

The Court: We will cross those bridges when we get to them.

Mr. Strouss: It goes to the general question to the admissibility of testimony of witnesses and executives from other roads and upon the general question of whether that [fol. 165] type of testimony is admissible and has any evidentiary value. Of course it does have the further objection as to opinion evidence.

Mr. Mason: We haven't offered any opinion evidence yet. When the time comes, if we have any opinion evidence to offer we will offer it. First of all, as to the objection as to the materiality or relevancy—

Mr. Strouss: May I interrupt; Mr. Mason read from the answer. Of course the fact that it is pleaded in the answer would not make it admissible in evidence.

The Court: Not necessarily, it would lay the predicate for it.

Mr. Mason: The allegations set forth in the answer are our affirmative allegations, they haven't been stricken and there was no move to strike them. Apparently the allega-

tions are regarded by the prosecution as raising a proper issue of an affirmative defense. In our answer we have undertaken to show that the Train Limit Law is peculiar to Arizona and that it is unreasonable because elsewhere in the United States on other railroads operating under, as we shall show, reasonably similar conditions, operations are [fol. 166] carried on without observing the statutory maximum train limit and with satisfactory or at least more satisfactory results than in Arizona. That is the gist of our allegations. Necessarily we will have to develop our case as to each of the individual railroads by the representatives of those railroads and as to the accounting features which will show the effects as reported under them to the I. C. C. we will develop them from the accounting witness. As to the operating features we will develop that from the operating witness. We do not propose to call the comptroller to tell how the trains are operated. We have a man fully qualified for that purpose here in the court room. I don't think there is any question as to relevancy. The cases cited by Mr. Strouss didn't indicate whether there were any allegations such as in this case going to the reasonableness or unreasonableness of a statutory restriction such as this which exists as unique and under all testimony everywhere else in the United States has been rejected and overturned.

The Court: It seems to the Court, Mr. Mason, that probably I should require you to make some showing of similarity.

Mr. Mason: We will make that. We will have the precise [fol. 167] figures to show sufficient similarity in operating conditions to give weight and materiality. It is not a mere tissue of evidence, as if we had taken operations in Australia or South Africa and attempted to assimilate them in our operations here.

Mr. Strouss: What they will do and what they have done is a different thing. I insist that the mere fact that they have pleaded in their answer certain things doesn't give them a right to prove that if it is not material to the issue before the court.

Mr. Mason: The pleading makes the issue and unless the pleading is stricken we are entitled to bring proof in support of our allegation.

Mr. Strouss: So far there has been no proof of similarity of conditions.

Mr. Booth: Suppose instead of this being a separate defense raised in the answer it was a bill in equity challenging the constitutionality of this law as unreasonable, as we did in the state of Nevada and in the United States court where this identical class of testimony was introduced. Let us suppose we had challenged the constitutionality of this law under a statute permitting the Southern Pacific or any railroad aggrieved to sue the state of Arizona in the state court [fol. 168] and we had filed a bill in equity challenging the constitutionality of the law in precisely the same language as the affirmative defense in this case, and the Attorney General, answering for the state, had come in and denied it without moving to strike the allegation of the complaint, I submit to your honor it couldn't be said we should be debarred from introducing testimony in support of our challenge of the constitutionality of the law in such a case as that. There is no difference in principle between a defendant who enters and challenges the constitutionality of a law upon which a penalty suit is pending and the same defendant who as a plaintiff challenges the constitutionality of a law on the same grounds. We are virtually in the position of going forward in this case, as Dean Wigmore says, we have the burden of going forward. We are in the position of a plaintiff in this case. If we had interposed no such defense as this, it would have been the duty of your honor to have rendered judgment against us and determined the exact — of the penalty upon the close of the plaintiff's case, but we come in as a moving party and challenge the constitutionality of this law on the ground it is unreasonable, that it is an interference upon interstate commerce, that it [fol. 169] is a burden upon interstate commerce and against the interest of safety, and counsel says in order to prove that, just as we proved it in Nevada, just as we proved it in the first case in Arizona with which your honor may or may not be familiar, but which was dismissed because of a substitution of Attorney Generals, in every case of this kind and I have been in every one tried so far in this country, the same general testimony has been introduced, because as Mr. Mason says, the law is unique. The only way by which we can establish the unreasonableness of this law is to show what under conditions generally the same in other parts of the country has been the practice of American railroads. Now this testimony here is not to prove actual dollars and

cents operating costs. It is to show a trend in freight operating expense and freight transportation expense which we will show has been coincident with increase in the length of trains. We cannot try our case by one witness, we cannot try it by twenty witnesses but I am satisfied when all the evidence is in that a mosaic, a composite picture will be presented to the court, whether the court sees fit to adopt it or not as a composite picture was presented to the Federal court in the Nevada case in which the bill of complaint was [fol. 170] almost exactly the same as this answer and in which testimony of this kind was received and considered and commented on in the findings of the court.

Mr. Strouss: If the Court please, I want to say a word because I happened to be in the former Arizona case. Those matters were heard by a Master and the Master in the Arizona case, as Mr. Booth will remember, said frankly he didn't feel it his duty to exclude any evidence. Time after time, when objections were made, he stated that he felt the objections were proper but he should admit all of the evidence and that was the policy followed in that case, and I think in the Nevada case also.

Mr. Mason: No, that is not correct.

Mr. Strouss: Well, the parts of the record that I read from Nevada, that seemed to be the policy of the Master there. At any rate, Mr. Morrison stated frankly that he didn't feel he should sustain the objection to any evidence and all through the taking of evidence overruled all objections and allowed all evidence in. He did in a number of instances state that he doubted the evidence was proper but felt he should receive all. Coming back to the proposition as put by Mr. Booth, that if we were in court in a bill of [fol. 171] equity in which the allegations were denied that that would make the testimony admissible, which I take it is the argument made. I know of no such law that you can plead in a bill of equity or in a complaint in a civil action matters that are irrelevant and immaterial to the issue which the court has to decide and that the court must receive evidence upon those immaterial matters.

The Court: No, I don't subscribe to that doctrine. The mere fact that you fail to move to strike it doesn't preclude you from making your objection.

Mr. Strouss: As I say, up to now there has been no basis laid, no showing whatever that would qualify this evidence

as admissible. On the second point, there cannot be any question, we have case after case here that summaries of all records are admissible where those records are in court, available for examination and for use in cross-examination of a witness, but unless they are then a summary is not admissible.

The Court: We might shorten this up, conditioned upon your showing the similarity, the court is going to overrule the objection upon the first ground. I will, however, Mr. Strouss carefully look into these authorities, I will not recess [fol. 172] to do it now but if I find I am in error I will correct it.

Mr. Polley: The general rule is stated in 22, Corpus Juris, 750, and especially note 81 on Page 751. That is the general rule supporting our first ground of our objection that the evidence is inadmissible.

Mr. Booth: I don't think I made myself quite clear on that point that to sustain the objection to this line of testimony is virtually to say to this defendant he is standing in the place of the plaintiff, attacking the statute, "You will not be allowed to present your case upon the theory that you believe the case depends." I don't believe if the conditions were reversed and we were the plaintiff in this case that it would be a proper objection for the Attorney General to say in effect to the plaintiff "You are off on the wrong theory of this case. We ask the court not to receive any evidence on that theory." That is virtually what he is asking you to do here.

The Court: As to the second ground, I take it that will dispose of all the objections before you can proceed with this witness, on this question of whether or not this exhibit which you have marked for identification is admissible where the [fol. 173] original records are not produced as against the objection that it is not the best evidence, I will hear you on that, Mr. Mason.

Mr. Mason: Your honor, almost from time immemorial and I think you will find the cases, I haven't them in hand, but the rule has been so well recognized, I haven't thought to bring the cases into court but it has been recognized in Federal court and I think every state court has proceeded upon the basis that excerpts from original records maintained by carriers in accordance with the requirements of the I. C. C. if duly proved by a competent witness are com-

petent testimony and that the original records themselves need not be produced if the witness is prepared to and does certify that the figures he prepared were compared with the original and are true transcripts thereof. As to this particular exhibit we have the further fact that the figures, except the computed figures, on the face of the exhibit, are themselves contained in annual reports made to the I. C. C. in accordance with the requirements of Section 20 of the Inter-State Commerce Act and as such are preserved in the records of the Commission as public records. Of course the carrier maintains counter-part copies for its own records. It is required to by the I. C. C. and the witness on the stand [fol. 174] is the officer who has charge of the department in which those records are maintained and kept so as to his competency to produce the records in his charge, which are the counterpart of reports made to the I. C. C. there could be no question. Our exhibit No. 9 this morning contains among other forms the form of the annual report rendered by carriers to the Interstate Commerce Commission. It is quite an elaborate form and this is the form furnished to carriers by the I. C. C. and by them filled out and returned to the Commission and we keep counter-part copies and are required to keep them as permanent records. Another document is a blank form prescribed by the Commission and furnished to the company and that is the reason I say that railroad accounts are kept in accordance with Commission requirements and records kept in accordance with the Commission requirements and are rendered on forms prescribed by the Commission. The authority of the Commission to prescribe such forms is contained in Section 20 of the Interstate Commerce Act. So far as I know there has never been any serious question raised as to the admissibility of excerpts. I know it has been followed and done in cases which I have tried in Federal courts, before the I. C. C. and state [fol. 175] commissions and in particular in the Nevada Train Limit case precisely the same type of evidence was received over the strenuous objection of the Attorney General of Nevada and was fully relevant and competent.

Mr. Strouss: They keep referring to this Nevada case. I submit if your honor will read the decision in that case there is no decision on any question of evidence of this sort by the court itself. If it cannot be found in the decision, it certainly was not part of the court's determina-

tion. I have yet to find a case, except one; where it has been held that excerpts or summaries of records are admissible unless those records are either in evidence or in court or available to counsel so they may be used for the cross-examination of the witness who is submitting the summary. The rule is stated in Corpus Juris 22 at Page 896, "Written statements prepared for use at a trial are not ordinarily admissible in evidence although they may be received where they are merely in the nature of summaries of voluminous records which are in evidence." The rule is again stated in 20, American Jurisprudence on Page 400, "To render a summary of voluminous records prepared by an expert admissible in evidence, the competency of the [fol. 176] records themselves as evidence must have been established and the records must further have been made available to the opposite party for the purpose of cross-examination. The Wigmore, 3d Edition, Section 1230." Two quite recent Federal cases are Berthold (etc.) Co. vs. St. Louis I. M. & S. Ry. Co., 80 Federal (3d Page 32; Hartford Accident & Insurance Co. vs. Collins, Dietz, Morris Co., 80 Federal (2d) 441; Chicago T. & T. Co. vs. Chicago Traction Co., 1 N. E. (2d) 87. The summary was permitted in evidence because the records were available before the Master.

The Court: One comparatively recent case is Shreeve vs. United States, I think. The only question in my mind is whether you have to have the use of the original books available.

Mr. Mason: Under the bulky document rule there isn't any necessity of that.

The Court: There is no gainsaying if the court is to function properly, to permit experts, such as the comptroller here, to summarize and point out what those records contain, but it is just a question of whether those records must be produced for their examination.

Mr. Mason: As stated here, all that the witness has done is to take from the annual report to the Interstate Commerce Commission for the counter-part copies which he retains, the figures in columns B, C, and D for the appropriate years. The computations of course are his own but the computations can be made by anyone with a pencil and paper. Those I don't think are questioned if the underlying figures are not questioned.

Mr. Strouss: As he first testified on some of these matters he has actually gone to the actual records of the company.

Mr. Mason: I think it says right here, "Source of these figures, annual reports to the Interstate Commerce Commission."

Mr. Strouss: I may be mistaken.

Mr. Mason: Section 16, Paragraph 13 of the Interstate Commerce Act provides, it is 49 United States Code, at page 58 of the West Publishing Co. Edition, first part of title 49, I will read only the part that happens to be material here, "The statistics, tables, and figures contained in the annual or other reports of carriers made to the Commission as required under the provisions of this chapter shall be preserved as public records in the custody of the secretary of the Commission and shall be received as prima facie evidence of what they purport to be for the purpose [fol. 178] of investigations by the Commission and in all judicial proceedings and copies from and extracts from any of said schedules, classifications, tariffs, contracts, agreements, arrangements for reports made public record as aforesaid, certified by the secretary under the Commission seal shall be received in evidence with like effect as the original." I take it that the carrier's counter-part copies can be received in evidence under that section. What we have done, however, in recognition of the bulky document rule, in place of bringing before you nearly twenty annual reports and perhaps other periodical reports rendered quarterly, have taken certain significant figures therefrom and brought them before you on one sheet. It seems to me that under the purpose and intent of Section 16, Paragraph 13 this is fully admissible without any citation of the cases at all.

The Court: It now appears that the original source of this is from the Interstate Commerce Commission record itself.

Mr. Mason: It is on the face of the exhibit and the witness so testified.

Mr. Strouss: That wouldn't make it admissible. If that record is admissible it is admissible for the purpose of [fol. 179] showing the matters therein stated and the record itself might be admissible.

The Court: You mean the record filed with the Interstate Commerce Commission?

Mr. Strouss: Yes, but that is not what is offered here and under our rules of court, if your honor will remember, which really govern the admissibility of evidence here, it would require a certified copy of the records of the I. C. C. in order for the matter to be admissible in evidence before this court.

The Court: Well, gentlemen, while you are looking that up we will take a ten minute recess.

Thereupon a short recess was taken after which proceedings were resumed as follows:

Mr. Mason: Your Honor, I have one or two additional comments to make.

The Court: All right.

Mr. Mason: In the first place I want to direct attention to rule 43A of the New Rules of Procedure for Superior Courts of Arizona in which it is stated that in any case the statute or rule which favors the reception of the evidence governs and the evidence shall be presented according to the most convenient method prescribed in any of the statutes or rules to which reference is herein made. The competency of a witness to testify shall be determined in [fol. 180] like manner. I take it that likewise goes to any portion of his testimony such as an exhibit which he may have prepared. I should also like to refer again to what Section 16, Paragraph 13, which "renders admissible in evidence" where authenticated by the secretary of the Commission, extracts from any reports which are made public records and are on file with that Commission. Then to the rule of the Arizona Superior Court, which provides that while proof of any matter of a copy may be made by a certificate of the officer having legal custody of the record or his deputy and accompanied by the certificate, this does not present the proof of official record or of entry or lack of entry therein by any method authorized by any applicable statute, or by the rules of evidence at common law. In so far as concerns the immediate question we have the officer who is by virtue of his position the custodian of the accounting records of the New York Central and by virtue of that office necessarily familiar with them and who testified to the accuracy of the official entries kept by that company which are counterparts of the official records on file with the I. C. C. and which official records are themselves evidence, and extracts from them are likewise evidence duly

[fol. 181] authenticated by the secretary. But here we have the official custodian of the counterparts required to be kept by the carrier, accurate and sworn counterparts on file with the Commission. This has not been mentioned before, we have here and this hasn't been produced previously, an official publication of the I. C. C. issued over its facsimile seal for the year ending December 31, 1939, and being merely a series of similar annual reports. This is an abstract of railway statistics for some of the railways of the United States and therein will be found the underlying figures for the year 1939 for the New York Central and its subsidiaries, Boston and Albany, which have been consolidated by this exhibit which are capable of check here in the courtroom as to 1939. Whether or not the summaries from 1922 to date are here available in Tucson I don't know, but I mention the fact that these records are figures from available sources and given recognition in the annual publication. This document would be admissible under the rule of Section 16, Paragraph 13, having the seal of the Commission on its face. Finally I should like to point out that the exhibit is the consolidation of excerpts from annual reports over a period of years and I am in [fol. 182] formed that there are some 55 or 60 of such annual reports, because in years prior to 1930 the New York Central rendered its reports individually through several of its subsidiaries which were then treated as individual reporting roads for the purposes of such reports. Those reports were consolidated when the New York Central formally took over the subsidiaries. So there would be a considerable number of annual reports brought into the courtroom merely for the accuracy of checking two figures from each of those reports. For the purpose of this exhibit it seems to us under the rule which permits excerpts or a consolidated showing of extracts made from a number of documents which it would be inconvenient to bring to court, that it is properly admissible and properly competent if properly testified to by the person who is in charge of the original document and who certifies to the correctness of the entries which he here produces.

The Court: Do you have anything further, Mr. Strouss?

Mr. Strouss: No, your honor, except this rule of the court which has application here, rule 44, Proof of Official Record which requires that an official record which is to be offered in evidence must be authenticated as set out in

[fol. 183] rule 44. The Federal statute does not control the admissibility of evidence in our courts, that is controlled by our rule here.

Mr. Mason: We are not proving an official record here, we are proving a company record by the custodian thereof who produces these excerpts.

Mr. Strouss: They are blowing hot and cold.

Mr. Mason: No, I am not, it is also a counterpart of an official record in Washington on file with the I. C. C. and by statute made evidence in and of itself.

The Court: There is no question but what if there was offered here a certificate of the proper officer of the I. C. C. as to these figures, if that were attached such certificate, I take it, would be admissible as a public record.

Mr. Strouss: No, even a member of the I. C. C. itself couldn't make a summary of the records that are filed with the I. C. C. and by attaching a certificate of the Commission make that admissible in this court. The record itself which is filed by the company, if properly authenticated, would be admissible under the rules of our court but a summary made by a member of the Commission or anyone connected with the Commission would not be admissible.

[fol. 184] Mr. Boyle: What about an extract?

Mr. Mason: We are offering an extract of the Commission, not summaries. These are extracts from the official records or counterparts of the official records.

Mr. Strouss: I would like a chance to finish my argument.

Mr. Mason: I don't want the court to gain an erroneous impression.

Mr. Strouss: You will have your chance to straighten him out if I have given the wrong impression. I certainly have the right to the same information that this witness has in preparing his exhibit. I have the right to have that same information, to examine it for the purpose of cross-examining him as to the summary which he has prepared and unless that is produced I am denied the information to which I am entitled. The bulk rule that Mr. Mason talks about doesn't mean because it is bulky you can make a summary and not permit the other side to see the record from which that summary is made. The bulk rule is that a summary may be made in order to do away with the necessity of introducing into evidence all those exhibits or entries into evidence to require the court to examine them to arrive [fol. 185] at the summarization of them but the evidence

must be available either in evidence or for the examination of opposing counsel so that opposing counsel may have the opportunity to use those in cross-examination.

[fol. 186] Mr. Mason: I just want to point out that this is not a summary, as Mr. Strauss insists on calling it. These figures which appear on the face of Exhibit No. 11 are themselves entries, that is, columns B, C and D are themselves entries in the report of the New York Central to the Interstate Commerce Commission. They are the figures shown in a particular line in that particular annual report. The figure for total railway operating expenses are shown in line 247 on page 213 of the annual report. It is the same for every railroad, of course, because every railroad must follow the same form. This witness has a form here for the year 1937.

The Court: Do you have something, Mr. Boyle.

Mr. Boyle: Well, I had a thought in mind when Mr. Strauss was arguing to your honor, but I think the court's observation to the effect that a described extract from the records of the Interstate Commerce Commission would be admissible here, is in a general way the answer to the question now before the court. Mr. Strauss says, "What can I do with this?" "I can't cross-examine intelligently unless I have all of the books of the railroad company or I have the records made to the Interstate Commerce Commission out of which these figures were derived and out of which these figures came." Now, he would be in exactly [fol. 187] the same position if these gentlemen had come in here with a certified copy of an extract of a report to the Interstate Commerce Commission, and I believe under the law is admissible here in evidence. Those matters, when they are filed there become public matters. They can be gotten by anyone. They are obtainable. We can bring them in here. But while perhaps all of us are not as familiar with the interpretations that may be placed upon our new rules, as we should be, the last sentence on page 69 to the effect that the rule does not prevent the proof of official records or of entries or lack of entries therein by any method authorized by any applicable statute or by the rules of evidence at common law. Now, an authenticated record or a certified copy of this record, certified to by the clerk or one of the Commissioners, I submit would be admissible here, and here is a man who knows of his own knowledge what that record is. He is in charge

of it. He caused the report from which this extract is taken to be filed with the United States Commerce Commission. Isn't he in such a position that proof of that particular thing may be made by other methods, and particularly any method or under any rule of evidence recognized [fol. 188] by the common law? As I say, if there is any doubt about the figures—I don't know that Mr. Strouss has seriously contended that there is or may—as I say, if there is any doubt that, of course, the reports from which these extracts are taken are available and we can get them for him.

Mr. Strouss: Just one answer to the argument made by Mr. Boyle, and that is, we don't have before us the matter of the authenticated copy of an extract of the I.C.C. When that problem arises, we will be ready to meet that with cases. That isn't the question which is here. This isn't any authenticated copy, and the argument which has just been made does not go to any question which is before the court.

The Court: Well, conditioned upon your showing similarity, the objection will be overruled.

Mr. Mason: Then, I take it, the exhibit is admitted in evidence?

The Court: Defendant's exhibit No. 11 in evidence.

Mr. Strouss: May I say, of course, we have given your honor a number of cases upon the other point.

The Court: Yes.

Mr. Strouss: We also have considerable authority on this, and we would be glad to give you a memorandum [fol. 189] of it.

The Court: I wish you would because I want to look into this matter as soon as I possibly can.

Mr. Strouss: I would like to ask that the court do that as early as possible, and we are confident when the court examines the question there might be a different view taken of this objection by the court. We think our objection is sound, and we think the court should look into it before permitting a lot of this testimony to come in. Of course, the court might strike it out later, but I always have a feeling that it is pretty hard to put out of one's mind things that are already in there, and I don't think the evidence should be allowed to be put in.

The Court: Well, you gentlemen give me a list of your authorities, and at the very earliest opportunity I will look into it.

Mr. Mason: May we have a list of them?

Mr. Strouss: Surely.

Mr. Mason: We may want to submit something.

Mr. Mason:

Q. Mr. Porter, referring to your Exhibit No. 11, did you yourself make the computation or have the computations made which reflect the results in column E.

A. I had the computations made.

[fol. 190] Q. And how did you derive the figure, for example, for the year 1939, in column E.

A. Column E, I divided the revenue from miles, as shown in column B, by—

Mr. Strouss: May I just interrupt a minute. Of course, as I understood the court's ruling, on that first objection, that is subject to a showing—

The Court: Showing similarity between the New York Central line.

Mr. Strouss: I think that showing should be made before the admission of this testimony.

The Court: Yes, I think so. I think that showing should be made by this or some other witness.

Mr. Mason: Then I will have to withdraw the witness. I intended to make it by a subsequent witness. Of course, we will have to have the Southern Pacific. Are we to be required to show that the grades and the general construction and the general description of the roads are similar?

The Court: I said generally.

Mr. Mason: We are going to show that. I think that if we don't show it, the court will properly disregard the testimony. But could we not proceed to do that later?

The Court: Well, you may proceed in that way.

[fol. 191] Mr. Mason: We will agree, if we don't make a sufficient showing of similarity to render the comparison a proper comparison, it should be disregarded. But comparisons cannot be made all at once. You must lay your foundation by a succession of witnesses.

The Court: You may proceed.

Mr. Mason:

Q. I understand the figure in column E is obtained by dividing the figure of money in column C by the figure "revenue ton-miles" in column B?

A. Yes.

Q. As to the figure in column F, is that similarly computed?

A. Yes, by dividing the money shown in column D by the revenue ton-miles, by the thousand revenue ton-miles.

Q. Will you state whether or not these computations are to the best of your knowledge correct?

A. They are.

Q. The total shown in the blocks at the end of the sheet, now, were those computations made or checked by you?

A. They were made under my direction.

Q. And those are likewise capable of mathematical check? [fol. 192] A. Yes, sir.

Q. And when you speak of percent of improvement, what does that signify?

A. That signifies your freight operating expenses, for instance, being less than the years 1936 and 1939 for one thousand revenue ton-miles than they were in the four years 22-25, in other words, we were able to operate the freight service at a less cost per thousand revenue ton-miles.

Q. Per thousand revenue ton-miles?

A. Yes, sir.

Q. Does the improved figure in column F, is that computed in the same way, on the basis of a reduction in cost?

A. Yes, sir.

Q. Now, what is the difference between freight operating expenses and freight transportation *transportation* expenses?

A. Freight operating expenses include all of the operating expenses, such as your maintenance of tracks, maintenance of your buildings, your stations, and other structures, your maintenance of equipment—all of your transportation expenses, including your train crew and station expenses, etc., plus your general expenses and your traffic expenses, which are assigned to freight operation in accordance with the formulas prescribed by the Interstate Commerce Commission. Your freight transportation expenses are merely one group of your operating

expenses and governs the cost of the actual operation of your freight train, station services, yard crews and so forth.

Q. Are those items which go into freight transportation expenses found in a particular group of accounts in the annual report?

A. Yes, they are found in a group which is known as "transportation expenses", a separate group.

Q. And are the expenses assigned to each of those cost accounts in accordance with the Interstate Commerce Commission accounting rules?

A. Yes, sir.

Q. Does the Commission designate that particular group as the group making up freight transportation expenses?

A. Yes, that is, they designate the various accounts which make up that group of expenses.

Q. For example, referring to exhibit No. 9, to the annual report, Form A, which is a part of Exhibit No. 9, can you state on what account and on what account numbers, and upon what pages of Form A which you have before you, [fol. 194] the transportation expenses which entered into or formed a part of the operating expenses?

A. The transportation expense will be found on page 308, commencing with line 162, and carried over to page 310, concluding with line 215.

Q. And the figures which appear here are the figures taken from your annual report under that particular designation?

A. Yes, sir.

Q. And of those particular pages?

A. Yes, sir.

Q. Mr. Porter, I show you again defendant's Exhibit No. 9 and ask you if you are familiar with a form, OSA and the form OSE issued by the Commission?

A. Yes, sir.

Q. Will you state how frequently those reports were rendered to the Interstate Commerce Commission?

A. These reports are rendered monthly.

Q. And on forms furnished by the Interstate Commerce Commission?

A. Yes, sir.

Q. Are those reports accumulated by months for each year?

A. They are. In other words, the report itself shows the figures for the month and the figures for the accumulated period.

Q. Up to the end of the year?

A. Up to the end of the year.

Q. Then, am I correct in understanding that the report for the month of December in any particular calendar year would cover not only that month but also the entire twelve months of that calendar year?

A. That is right.

Q. Have you before you a document in one sheet, Mr. Porter, entitled "New York Central Railroad Company, (including all leased lines), freight service operating averages, calendar years 1922, 1924, 1926, 1928, 1930, 1932, 1934, 1936, 1938 and 1939?"

A. Yes, sir.

Q. In what manner was that statement prepared?

A. This statement was prepared from our office copies of the reports filed by the Interstate Commerce Commission, forms OSA and QSE, and also from data taken from the annual report, Form A as filed with the Interstate Commerce Commission.

Mr. Mason: Your honor, may we have the statement marked No. 12 for identification?

The Court: It may be marked for identification.

Mr. Mason:

[fol. 196] Q. Has the exhibit been compared with the original report or the counterparts thereof on file in your office?

A. They have, and the exhibit was prepared under my direction from those reports and I personally verified the figures for the year 1939. I did not attempt to verify them for each of the years. However, I have no reason—I have every reason to believe that they are correct.

Q. Now, there are certain of these figures shown on here which are computations of the other figures, are they not?

A. Yes, sir.

Q. Are those the items contained in the legends as to the various sources shown at the foot of the exhibit?

A. Yes.

Q. And the computations in the column M, are they entirely computed from the preceding figures?

A. Those computations are computed from the figures shown for the years 1939 to 1922.

Q. Now, the "DEC", which appears in lines 1 and 2, what does that signify?

A. That indicates a decrease in the percentage.

Q. Are all those percentage figures in column M?

A. They are.

[fol. 197] Q. Are all of the units to which the figures in the other columns relate indicated under the word "item," column B?

A. Yes, sir.

Q. For example, I have this in mind, the figure 43.6 in column C, line 6 indicates "tons," for example.

A. Yes, of course; this is an average. That is the average capacity for freight-carrying tons. The unit for that does not appear in the item. You have to arrive at that by taking your capacity of all freight-carrying cars, which is shown in schedule 417 of the annual report of the Interstate Commerce Commission. Divide that by the total number of cars available for that service, which is also shown in the same schedule.

Q. Will you say, Mr. Porter, whether the exhibit is a true and correct statement, to the best of your knowledge and belief?

A. Yes, sir, I believe it is.

Mr. Mason: I will say, your honor, this exhibit is for the same general purpose, and will be coupled up with the Southern Pacific operations, and particularly, those in Arizona in the same manner we shall undertake in connection with the exhibit received as No. 11. It is for the [fol. 198] purpose of showing the trend of the operations over a representative recent period of years upon one of the major trunk lines of the United States, particularly, for the purpose of showing the results of such operations.

The Court: You are offering it evidence?

Mr. Mason: We are now offering it in evidence as No. 12.

The Court: I presume you have the same objection to this, Mr. Strouss?

Mr. Strouss: Yes, sir, the same objection as to Exhibit 11. I would like to ask the court for the right to examine the witness on voir dire.

Mr. Mason: I have no objection. Perhaps I should have withheld the offer until after the examination had been made.

The Court: Go ahead.

Mr. Strouss:.

Q. Mr. Porter, you have before you Defendant's Exhibit 11, which is the map of the New York Central Lines?

A. Yes, sir.

Q. Are you familiar with these lines that are indicated there on the map as to the number of tracks which were operated?

A. No, I would not say that I am. I do know that they—that we have double track line all the way from Chicago [fol. 199] to New York, and part of it is four tracks, but as to just between what points that four-track is I would not attempt to say.

Q. But you do know that there is a double track the complete distance between New York and Chicago?

A. Yes, sir.

Q. And at some parts there is a four-track system?

A. Right.

Q. Now, isn't it true also between—of course, that would have, the number of tracks that are operated would have some effect upon the cost of operation, would it not, Mr. Porter?

A. The number of tracks operated would have some effect, yes, but usually the more tracks you have the more maintenance expense you have.

Q. And the more traffic you can handle?

A. Undoubtedly more traffic you can handle.

Q. The purpose of having the double track is to reduce the cost of operation, isn't it?

A. Well, that probably would have some bearing to it, probably, also the four tracks have something to do with the speed of handling the traffic, too.

Q. Well, of course, the speed of handling the traffic goes [fol. 200] to the cost of operation, also, does it not?

A. Yes.

Q. What about density of traffic? Does that have any effect upon operating costs, too?

A. Yes.

Q. Considerable, does it not?

A. Yes, sir.

Q. So that a system which was located where there is great density of traffic would probably have a lesser operating expense than a system where there was a lighter traffic, isn't that true.

A. Yes, I would say that railways having a very large density of traffic, your operating cost per ton-mile, per revenue ton-mile, would probably be less than it would be where you have a very light traffic.

Q. The length of divisions would have an equal effect upon operating costs, too, would it not?

A. Well, I don't know so much about that. I would rather have an operating man testify as to that.

Q. Of course, one of the items which enters into cost of operating a locomotive is steaming that locomotive up before it goes out on the run, that is true, isn't it?

A. Yes, sir.

[fol. 201] Q. And if that locomotive is run over a division of longer miles, of course, that initial expense would be spread over more miles?

A. The initial expense of steaming up the locomotive, yes.

Q. Preparing the locomotive?

A. Yes, sir.

Q. Now, the wage scales have a bearing upon operating costs, don't they?

A. Oh, yes.

Q. And wage scales differ in different parts of the country?

A. I would not say as to that. That would only have to be an assumption on my part.

Q. You only know as to the New York Central.

A. Right..

Q. Fuel cost is another item that enters into cost of operation, isn't it?

A. Yes, sir.

Q. And the amount of fuel required, of course, would depend upon the operating conditions to some extent, whether there — grades, or curves, because all that would resist the operation of the train?

A. Well, I have no doubt that the amount of fuel required would depend upon the grade. It would also depend upon the size of the train. It may depend upon various causes, [fol. 202] other causes.

Q. The availability of the fuel enters into the cost, that is whether you have to transport a short or a long distance to the particular division?

A. That has a bearing on the cost, of the fuel, yes, sir.

Q. Switching costs are applied to your general transportation costs?

A. They are.

Q. A part of your general transportation costs?

A. Yes, sir.

Q. And where the type of traffic is such that it requires a great deal of switching, that would tend to increase the cost?

A. Undoubtedly, if your traffic has to be switched often there is no question but what the cost would be more.

Q. For example, the type of traffic that you pick up or send out, for example, you take the lettuce which requires to be iced, picked up at lettuce sheds and transported 35 to 40 miles to an icing plant, would that switching cost, that would enter, of course, into the cost of transportation?

A. I assume so. I don't know that we have any of that kind of operations, though.

Q. Well, that, of course, would be a different type of [fol. 203] expense than what you have on your railroads, or enters into your operations?

A. It would probably be an expense.

Q. Yes, but you don't have that type on your railroads?

A. I don't know that we do.

Q. Do you know of any citrus that is grown anywhere along the New York Central Lines that might require switching?

A. I don't know of any citrus that is grown along the New York Central Lines, where we originate any.

Q. Do you know any centers where lettuce is grown along the New York Central Lines to any great extent?

A. Well, I think there is some places where there is some that is grown, but I don't know that we handle a lot of it. I think a good deal of it is handled by trucks.

Q. Of course, another item that enters into your transportation costs is your water for your locomotives?

A. Yes, sir.

Q. And the availability of water would have and does have an effect upon the cost of that item, would it, Mr. Porter?

[fol. 204] A. Oh, yes.

The Court: I see the noon hour has arrived. We'll take our recess until 2:00 o'clock.

[fol. 205] 2 P. M. November 25, 1940.

All parties being present as heretofore noted, proceedings were resumed as follows:

LEROY V. PORTER resumed the witness stand.

Mr. Strouss:

Q. Mr. Porter, these exhibits which you have testified to, are they related to the whole New York Central system?

A. Yes, New York Central Railroad Company.

Q. That is not limited then to that part of the system which is in the heavy black lines?

A. No, sir.

The Court: That is, it is to the company itself and all its subsidiaries and leased lines?

A. Yes, sir.

Mr. Strouss: I was asking you this morning before recess about some items that enter into operation and transportation cost. Of course the wages of engine men, trainmen, yardmen, and so forth would all be a considerable item in that.

A. They are all included as part of the cost.

Q. Do you know how many states your railroad operates in?

A. Thirteen.

Q. Of course the full crew laws would have some effect upon operation and transportation costs, wouldn't they? [fol. 206] A. I imagine they would but as to what effect I am not prepared to say. I think that is something that an operating witness ought to testify to.

Q. You don't know whether there are full crew laws in all of the different states?

A. No, sir.

Q. Do you have the double-header rule?

A. I couldn't say.

Q. That would have an effect upon operations and operation costs, wouldn't it? You know what a double-header rule is, don't you?

A. You mean where you double head?

Q. Limiting the tonnage to the rating of one of the engines.

The Court: I might say that the court doesn't know what it is so if you can enlighten me, Mr. Strouss.

Mr. Mason: We will have an operating witness from the New York Central who will answer these questions. I haven't objected but his witness is not qualified as to that.

Mr. Strouss: He has testified to transportation expense.

Mr. Mason: Purely as shown in reports to and records of the Interstate Commerce Commission as required by [fol. 207] the Commission and rendered to the Commission. He has offered solely for the purpose of identifying these figures taken from these reports which are prepared as I understand him under his direction and by him and for the company rendered to the Interstate Commerce Commission.

Mr. Strouss: Are you objecting to my question?

Mr. Mason: No, I am just making clear what the witness's qualifications are.

Mr. Strouss: My recollection is that he testified as to the form of the annual report and as to all the items which enter into the transportation expense, beginning with items on Page 302 and extending to Page 313 and these are the items I am inquiring about at the present time.

Mr. Mason: The entries which appear on these pages are the entries which summed up together make the figures here and which figures are reported to the Commission. Now what or how those are affected is not a subject of the witness's direct testimony. However, whatever information you can extract from him within his qualifications you are welcome to try to do.

Mr. Strouss:

Q. Locomotive supplies would be an item of transportation costs?

A. Yes, they are an item.

[fol. 208] Q. And would vary according to the availability of the supplies and the market at the time they are purchased?

A. That is true; of course, that would apply to any material, the availability of the material as to whether

you have to haul it a long or short distance would probably have some bearing upon its ultimate cost.

Q. It would of course vary with respect to those items the same as any other item of that sort?

A. You mean it would—

Q. According to its availability.

A. If you don't have to transport it.

Q. Do you use any electric locomotives or Diesel locomotives for switching?

A. Yes, sir.

Q. Is that quite a usual operation on the New York Central?

A. We have electric locomotives in New York City, I think, and also we have used Diesels and we have some Diesels now in Buffalo.

Q. I notice in your exhibit No. 11—

Mr. Mason (Interrupting:) If your honor, please, this voir dire examination on exhibit No. 12. The witness was not submitted for cross-examination.

[fol. 209] The Court: Yes, I will sustain the objection. Had you completed with your voir dire, Mr. Strouss?

Mr. Strouss: Just a minute. Of course it is voir dire on 11 but I have asked the court for permission to go into this question of similarity of conditions also.

The Court: The court would prefer that you defer any further examination you have and let Mr. Mason finish with his direct examination.

Mr. Strouss: Very well.

Mr. Mason: I didn't mean to object to any further questions that Mr. Strouss might have preliminary to a further objection, if he has one, to exhibit No. 12 and if there are further questions along that line I will be glad to defer to Mr. Strouss.

Mr. Strouss: For the purpose of the record I want to make the same objection to any oral testimony by the witness relative to operating conditions on the New York Central lines.

Mr. Mason: I haven't offered the witness as an operating witness and I don't pretend he is qualified as an operating witness to discuss operating conditions on the New York Central lines.

The Court: That is very apparent.

Mr. Strouss: I am not limiting this to operating testimony. My objection goes to any testimony relative to the [fol. 210] New York Central lines, their costs, or whatever it may be. This law is an Arizona law which depends upon conditions in Arizona. First our objection is that it is immaterial and, second, there has been no foundation laid for it and it is incompetent for that reason.

The Court: The objection is overruled.

Mr. Mason: We offer the exhibit as exhibit No. 12.

The Court: It may be received.

The document referred to was received in evidence and marked defendant's exhibit No. 12.

Mr. Mason:

Q. I take it, Mr. Porter, that these exhibits, 11 and 12, were prepared by you or under your supervision for the primary purpose of showing the trend of the various operating averages and expenses rather than for the purpose of showing absolute cost, is that correct?

A. That is correct.

Q. And the development of these matters with relation to the New York Central system operation for the period between 1922 and 1939 both inclusive.

A. Yes, sir.

Mr. Mason: I think that is all, Mr. Porter, thank you. Cross-examine.

[fol. 211] Cross-examination.

Mr. Strouss:

Q. Of course this only shows trend of operating averages and expenses on the New York Central, doesn't it?

A. That is right.

Q. You don't purport to offer testimony as to anything else than the New York Central lines?

A. No, sir.

Q. Of course those trends may be affected by a number of different situations, may they not? I mean, for example, improvement in equipment.

A. Well, that may have some effect on them.

Q. The locomotives, for example, have been equipped with super heaters which would give more efficient opera-

tion of the locomotives, that would affect the trend, wouldn't it?

A. I am not qualified to say whether the application of a super heater does or does not.

Q. Assuming that it does increase the efficiency of the locomotive, that would affect the average trend of costs, would it not?

A. Yes, assuming that it gives a locomotive more power, that would have some effect.

Q. Of course variations in costs of materials and in fuel costs would affect the averages and trends of the different years?

[fol. 212] A. Yes, sir.

Q. And variations in your wage agreements with men would have their effects?

A. Well, they would have some effect where there was very much of a change in those wages either up or down. Of course it would have some effect for that particular year or when the change was made.

Q. Wages is a big item in transportation costs?

A. Oh, yes.

Q. And a variation of a percentage up or down would affect the transportation costs and the trend from year to year?

A. That is true.

Q. Improvements in your system such as grade eliminations and curve eliminations would have their effect on costs, transportation costs, wouldn't they, changes from year to year?

A. I don't know what effect the curve elimination might have, I wouldn't want to say.

Q. Assuming that the elimination of the friction on a curve would reduce fuel consumption, that would affect the trend of course.

A. If it was something that you didn't have before and something new that was applied and if as you say it might [fol. 213] reduce fuel, why naturally that would have some effect upon the results after the application of the improvement.

Q. Which item was this in the annual report from which this exhibit was made, exhibit No. 11?

A. That is on Page 312 and 313, line 247. The freight expense is shown in column E.

Q. That item is a total of the different items of transportation expense which you testified to in direct?

A. That is a total of all operating expenses including maintenance of way, maintenance of equipment, traffic generally and transportation.

Q. You are speaking of the item in column C of exhibit No. 11?

A. Yes, that is column C.

Q. And that, as it appears in the annual report, is merely a total of the preceding items, itemizing the operating expense of the railroad?

A. That is right.

Q. Item D is the total transportation item?

A. That is the total of the transportation items shown on pages 310 and 311.

The Court: All of the items listed in D in defendant's exhibit No. 11 are included I take it under column C of your freight operating expense?

A. Yes, sir.

[fol. 214] The Court: That is the over-all expense?

A. That is right.

The Court: Whereas this other is merely the transportation expense?

A. Yes, sir.

Mr. Strouss:

Q. This total is made up from all these items which appear beginning at Page 303 of the annual report?

A. Page 303 is your railway operating revenue.

Mr. Strouss: Excuse me, Page 304?

A. Beginning at Page 304, yes, sir.

Q. So that these items which begin at 304 and extend over to 313, what you have set out in your exhibit is the total of those items?

A. Right.

Mr. Strouss: That is all.

Mr. Mason: That is all for Mr. Porter. May the witness be excused.

The Court: Have you any objection to his being excused.

Mr. Strouss: No, but I don't in excusing him withdraw my objection.

The Court: I understand.

[fol. 215] ALFRED H. WRIGHT was called as a witness in behalf of the defendant, and being first duly sworn, testified as follows:

Direct examination.

Mr. Mason:

Q. Please state your name and business headquarters to the Reporter.

A. Alfred H. Wright, Assistant General Manager New York Central Lines East with headquarters at Syracuse, New York.

Q. Have you before you a copy of the document which has heretofore been marked as Defendant's Exhibit No. 10 for identification?

A. Yes sir.

Q. That exhibit has previously been stated by Mr. Porter to be an outline map of the lines of the New York Central Railroad Company. Are you familiar with the lines of the New York Central and its affiliated and subsidiary lines?

A. Yes, in a general way. The territory over which I have jurisdiction is shown in the heavy line.

Q. Will you state whether or not from your familiarity with the New York Central system this map is a reasonably accurate outline reproduction of the system lines and their location?

A. Yes sir.

Mr. Mason: I will explain to Your Honor and for the benefit of counsel that we don't offer the exhibit as an accurate and complete reproduction but merely an outline map to show the general location of the railroad which the witness represents and which is being discussed.

Q. What portion of the lines shown on Exhibit 10 for identification did you say are the lines over which you have jurisdiction as assistant general manager?

A. The lines indicated by the heavy black line extending from Buffalo and Suspension Bridge on the west to Weehawken and New York on the east, to Newberry Junction and Cherry Tree on the south, which points are located in Pennsylvania and Montreal and Ottawa on the north.

Q. Does your jurisdiction extend to certain lines shown in the State of New York and the Province of Ontario and Quebec, which are shown in lighter lines, as well?

A. Yes, sir.

Q. How long have you been employed by the New York Central?

[fol. 217] A. I entered the service of the New York Central in 1900 as a clerk at Rotterdam Junction. I served in a clerical capacity in yards and stations for a period of eleven years. I was then appointed assistant trainmaster of the Mohawk Division, and served in that capacity for four months, and then was transferred as trainmaster to the River Division, which embraces the territory between Albany and Weehawken, New Jersey. I served in that position for twelve years. I was then appointed assistant superintendent of the River Division and served in that capacity from April, 1923, to December, 1924. I was appointed superintendent of the River Division in December, 1924, and served in that capacity until January, 1927. I was appointed assistant to the general superintendent and marine manager of the New York Central in January, 1927, and served in that position until February, 1930, when I was appointed superintendent of the Consolidated River Division and New York terminal districts. I served in that position from February, 1930, to November, 1937. On the latter date I was appointed assistant general manager of the lines east and am still serving in that capacity.

Q. As assistant general manager of the lines east, what [fol. 218] is the nature of your duty and jurisdiction?

A. I have general charge of the operation in the territory I have described as comprising the New York Central Lines, East.

Q. Between what points does the Mohawk Division extend, or did it extend, when you were assistant trainmaster and otherwise employed?

A. The same as at the present time. By referring to the map it would be the territory between Syracuse and Albany, New York.

Q. Is it part of your duty to travel frequently over the lines subject to your jurisdiction?

A. That is true, yes, sir.

Q. And to become familiar with all the operations thereon?

A. Yes, sir.

Mr. Mason: Exhibit Number 10 has not been formally offered in evidence, and we now offer it in evidence.

Mr. Strauss: We make the same objection to this exhibit as made to the other.

The Court: It may be admitted in evidence.

The Clerk: Exhibit 10.

Mr. Mason:

Q. What is the mileage of the lines east which are subject to your jurisdiction?

[fol. 219] Mr. Strouss: I don't want to be interrupting the examination continually, but I would like an objection, so it may be understood that I am objecting to all the oral testimony as to the New York Central—

The Court: Yes, the record may show the objection.

Mr. Strouss: The same objection, incompetent, irrelevant and immaterial.

The Court: The same objection is renewed as heretofore made.

Mr. Strouss: And no proper foundation.

Mr. Mason: I can see the pertinency of the objection as to the relevancy, but certainly as to competency it seems to me that question has been settled. However, I will not comment further in view of the ruling.

The Witness: May I hear the question again.

Mr. Mason: Yes, I wanted to say that I agree with Mr. Strouss that he may have the objection without repeating it. Now the question, I think, Mr. Reporter, was asking as to the mileage included in the lines east.

(Last question read by the Reporter.)

A. Approximately 2950 miles.

Q. Is the operation of that mileage single track?

[fol. 220] A. Yes, 1885 miles are single track.

Q. How much double track and how much four-track?

A. 658 miles of double track, 414 miles of four tracks.

Q. Does the mileage which you have recited include branch lines as well as main lines?

A. Yes.

Q. Is there a substantial branch line mileage included there?

A. Yes, a considerable part of the single track mileage is branch line mileage.

Q. What is the standard rate of rail in the main line?

A. 115 pound section. We have more than that, it runs from 115 to 130.

Q. Do you observe any speed limits for your trains?

A. Yes, we have maximum speeds established for both freight and passenger.

The Court: You mean established by the company or by law?

A. By the company.

Mr. Mason:

Q. They are of your own establishment?

A. That is true.

Q. Omitting for the purpose of this question special restrictions at particular locations or curves, or for other similar reasons, what general speed limit on freight trains do you observe in main line operation?

A. Forty-five miles per hour on freight tracks, 3 and 4, and fifty miles per hour on high-speed tracks 1 and 2.

Q. That is, in four-track territory?

A. Yes.

Q. In double track territory?

A. Double track territory, forty-five miles an hour; some branch lines, forty.

Q. Single-track the same?

A. The same, yes. I might add, to make my answer more fully correct, in some of our single-track territory in Pennsylvania, the maximum speed is thirty-five miles per hour.

Q. Is that dictated by curves or mountainous character of the territory?

A. It is physical conditions due to the lack of elevation on the curves.

Q. Is your main line mileage generally protected by block signals?

A. Entirely so.

Q. Are your trains operated, or your operations conducted pursuant to any particular code of rules?

A. We follow very closely to the standard code of rules of [fol. 222] the American Railroad Association.

Q. Is that a general code of rules promulgated by the Association of American Railroads?

A. Yes, sir.

Q. And adopted with slight variations by the New York Central?

A. That is true.

Q. Have you been supplied heretofore with copies of exhibits already received in the trial relating to the freight and passenger cars of the Southern Pacific Company, being Exhibits 2, 3 and 4, and also Exhibits 5 and 6 relating to freight and passenger locomotives of the Southern Pacific Company?

A. Yes, sir.

[fol. 223] Q. I will ask you to direct your attention first to Defendant's Exhibit No. 2, which is the chronology of the freight box cars.

A. Yes, sir.

Q. In your capacity as an operating officer of the New York Central have you become familiar generally with the characteristics of the freight box car equipment owned by your Company and operated over its lines?

A. Yes, sir.

Q. Will you say, addressing yourself to Exhibit No. 2, whether or not the developments and improvements in box car construction which are there indicated, are reasonably representative of the developments and improvements in box car construction of the box cars on it by your Company?

Mr. Strauss: Just a minute; I would like to ask the witness a question or two.

Q. The information you have along that line would be information that was taken from the records of your Company, isn't that true?

A. No, I would answer that question from my general knowledge. I have not the detail description of our equipment with me.

Mr. Mason: To qualify him further, in order to meet the objection—

Q. Have you in the course of your duties, or do you in [fol. 224] the course of your duties as an operating officer have access to and observe the box car equipment owned and operated by your Company?

A. Yes, sir.

Q. Is that a necessary part of your duties?

A. Yes, sir.

Q. Is it any part of your duty to become familiar with the appliances attached to box cars, including those used for the control of their speed and brake or stoppage?

A. I would not attempt to qualify as mechanical man on the details of the devices. My knowledge would extend more generally to the size, capacity, and general construction of the cars.

Q. Would it include, for example, any knowledge as to the use of steel center sills, or steel under frames, steel sides?

A. Yes.

Q. Would it include any knowledge as to the type of wheels being applied to such cars?

A. I don't think I could go into the details of the mechanics of it. To go into the wheels and other specifications, I don't think that I could do that in detail.

Q. Has the New York Central made improvements in its [fol. 225] box car equipment over the period of your service?

Mr. Strouss: If the court please, that is again a matter of record, what their equipment is, a matter of record with that Company.

The Court: Objection overruled as to this particular question. The witness seems to be qualified to answer it.

Mr. Strouss: I had not finished my question that I was—that I had asked to ask the witness before. I would like to finish the question.

Q. Where do you get your information from concerning this equipment?

A. This equipment and such information as I have is taken from our equipment guide issued by our equipment department.

Q. That is a record of your Company?

A. Yes, sir.

Mr. Strouss: Now, we submit the record is the best evidence.

Mr. Mason:

Q. Have you obtained any of your knowledge from your own observation of the cars?

A. Yes, sir.

Mr. Strouss:

Q. How many freight cars does the New York central own?

A. Well, as of 1939 we had 35,577 steel under frame [fol. 226] cars.

Q. Now, just a minute, how many cars, without describing them, approximately, if you know, without referring to the record? Do you know of your knowledge?

A. I know from our equipment register, our ownership.

Q. You don't mean to testify that you have examined and seen all of the different freight cars that the New York Central Line owns, or any considerable portion, with your own eyes?

A. Well, I have seen a considerable portion, but I could not attempt to say what percentage of it.

Mr. Strouss: We urge our objection.

Mr. Mason:

Q. Can you say whether or not you have seen substantially all of the different types?

A. I think I have seen every type of box-car that we own.

Q. (Read by the reporter as follows:) Q. Has the New York Central made improvements in its box car equipment over the period of your service?

A. Well, I might say that in 1920—

Mr. Strouss: That can be answered "yes" or "no".

The Court: Yes, that can be answered "yes" or "no".

[fol. 227] A. Yes, there has been an improvement.

Mr. Mason:

Q. Has there been any improvement, for example, in the—as indicated by Exhibit No. 2 for Southern Pacific box cars in the substitution of steel or steel under frame cars in place of wooden under frame cars previously used.

A. Yes, sir.

Mr. Strouss: May my objection go to all this interrogation?

The Court: Yes.

Mr. Mason: Have you made any examination to determine approximately the number of steel and steel under frame cars now owned by the New York Central? Box cars, I mean.

Mr. Strouss: Of course, that can be answered yes or no.

A. Yes.

Mr. Mason:

Q. And where did you obtain that information?

A. From the equipment records in our equipment office.

Q. And is that one of the offices subject to your jurisdiction?

A. Not directly subject to my jurisdiction, but required [fol. 228] to furnish any information that I may require.

Q. Is that record available to you as Assistant General Manager?

A. Yes.

Q. By virtue of your position?

A. Yes.

Q. You have already stated, I take it, in answer to a question asked by opposing counsel, the number of steel and steel under frame cars as owned by the Company. As of what date was that? What was that date?

A. I don't think I made a complete answer.

Mr. Strouss: If the court please, that answer was not responsive to the question I asked. I did not ask about steel frame cars, and I don't think counsel can take advantage of the voluntary statement.

The Court: He may answer. Go ahead.

Mr. Strouss: Of course, I want my objection in.

The Court: Very well.

Mr. Mason: I will ask the witness directly. How many steel and steel under frame cars does the New York Central own or did own at a recent date which you may specify?

Mr. Strouss: May we have our objection as incompetent, [fol. 229] irrelevant and immaterial, not the best evidence, no foundation laid.

The Court: Objection overruled.

A. As of 1939 we owned 35,577 steel under frame cars, 129,239 all-steel cars and there were 145 other cars.

Q. Does the New York Central, according to your own observation, ever handle cars of the Southern Pacific ownership?

A. Yes, sir.

Q. Is that a regular and ordinary incident?

A. Oh yes, yes, sir.

Q. Will you state whether or not you handle freight cars owned by other railroads of the United States and Canada other than the Southern Pacific and New York Central?

A. Yes, sir.

Q. Is that a common and regular occurrence?

A. Yes, sir.

Q. It is a fact, is it not, that nearly every freight train containing box cars will contain so-called foreign equipment?

A. That is true.

Q. Does your Company ever handle cars of the Pacific Fruit Express Company classification, the so-called PFE refrigerators?

[fol. 230] A. Yes, sir.

Q. Are those handled by you in substantial volume?

A. Yes, we have many of those running into New York.

Q. You have observed those in numerous trains, have you?

A. Yes, sir.

Q. You handle other refrigerator cars owned by railroad companies or by railroad-owned agencies?

A. Yes, cars of many ownerships.

Q. So-called private refrigerator car lines?

A. Yes, sir.

Q. Can you give us some examples of such private refrigerator car lines with which you are familiar?

A. The meat companies, the Armour Refrigerating Company, Swift Packing Co.

Q. What is the line which operates the particular refrigerator cars from the Southeast and the Atlantic Coast?

A. Merchants' Dispatch Transportation Co.

Q. Is there another one in that territory, the Fruit Growers Express Co.

A. The Fruit Growers Express Co., and the Merchants Dispatch Transportation Co., and Pacific Fruit Express are the three larger ownerships.

[fol. 231] Q. Now I will ask you if you will please refer to Exhibit No. 4, Defendant's Exhibit No. 4, which is a showing of passenger car construction—

Mr. Mason: And I think we may again agree, Mr. Strouss, your objection to the very same testimony may go to that.

Mr. Strouss: Yes, but particular objection, as calling for the conclusion of the witness.

The Court: Yes.

Mr. Mason:

Q. Have you examined that exhibit, Mr. Wright?

A. Yes, sir.

Q. Are you familiar from your observation or in the course of your career as an operating officer of the New York Central generally with the construction of the passenger cars owned by the New York Central?

A. Yes, sir.

Q. And without undertaking to go into the detail of the passenger car construction, can you say whether the New York Central has made improvements in those passenger cars in the past forty years?

A. Yes, sir.

Q. Has it gone from wood to steel construction, for example?

A. Yes, sir.

[fol. 232] Q. Has it made any increases in the strength of the frame and the size?

A. Yes, sir. The size is increased and the steel construction has resulted in a larger car.

Q. Has there been any improvement at all, and if so, to what extent generally since 1912?

A. Well, our carrying capacity, for instance, has increased from an average of perhaps fifty passengers to eighty-four passengers, increased the seating capacity, and has grown from—changed from wooden construction to steel.

Q. Do you operate any wooden coaches any more in regular passenger train service?

A. No, sir.

Q. Do you know, and if so, will you say whether there has been any improvement in heating arrangements upon your passenger cars?

A. Yes, there has been heat along with the air-conditioning. There has been a steady improvement in air-conditioning.

Q. Does your company operate any passenger cars owned by the Pullman Company?

A. Yes, sir.

Q. If you know, will you state whether the Pullman cars are a standard type of sleeping car operated generally over the United States?

[fol. 233] A. Yes, sir, they are.

Q. Do you interchange such Pullman Passenger cars with other railroads with which you connect?

A. Yes, sir.

Q. Now, you have made a trip as a passenger over a part of the Southern Pacific, have you not?

A. Yes, sir.

Q. Have you ridden on a Pullman car on the Southern Pacific.

A. Yes, sir.

Q. Are the types of Pullman car on the Southern Pacific on which you have ridden similar to the types of Pullman car operated on the New York Central?

Mr. Strouss: Similar in what respect?

Mr. Mason:

Q. Is there any substantial dissimilarity?

Mr. Strouss: How do you mean, mechanically or steel construction?

Mr. Mason: That came within the observation of the witness as an operating officer.

A. The car on which I rode on the Southern Pacific and one or two other cars that I entered are what I would call the standard Pullman type construction in its layout. I made no examination as to the type of construction or equipment.

[fol. 234] Q. Was it air-conditioned?

A. Yes, sir.

Q. Will you say whether or not the Pullman cars operated by the New York Central are in general air-conditioned?

A. In general, yes. Our through-passenger service, all regular line cars, are air-conditioned. When we are required to substitute extra cars we sometimes have to use cars that are not air-conditioned.

Q. Does your company have air-conditioned coaches in certain of its trains?

A. Yes.

Q. I would like to refer you again to Exhibit No. 4 and to certain types of passenger equipment which are shown in the last four blocks on the right-hand side of the exhibit. Does your Company operate coaches bearing any general similarity in appearance to those coaches?

A. Yes, sir.

Q. Have you before you Exhibits Nos. 5 and 6, relating to Southern Pacific locomotives, freight and passengers?

Mr. Strouss: I have not made my objection.

Mr. Mason: It is understood yours is a running objection.

[fol. 235] Q. No. 5 is the freight locomotive and No. 6 the passengers?

A. Yes, sir.

Q. Mr. Wright, in your position as an operating officer is it necessary for you to become familiar generally with the types of locomotives, steam locomotives used by the New York Central?

A. Yes, sir.

Q. Now, in the forty years that you have been with the New York Central, has there been any development in or improvement in the locomotives operated by your Company in freight and passenger service?

A. Yes, sir.

Q. Did you ever have on the New York Central any locomotives corresponding in wheel arrangement and otherwise generally to those shown on Exhibit No. 5?

A. Yes.

Q. Will you state what your types were?

A. Our locomotives which we term the type F correspond in wheel arrangement, tractive effort, to what is indicated as ten-wheel 4-6-0 on the exhibit referred to.

Q. That is Exhibit No. 6, I think, the passenger exhibit that you now have, isn't it?

A. Yes, I have both here.

[fol. 236] Q. Yes, the one to which you are now referring, the one showing the passenger locomotives. Will you proceed then, with No. 6? You have it before you.

A. We also have engines which we term the Class H, corresponding in a general way to the one shown on the exhibit as being of the Pacific type.

Q. Now, there are two Pacific types there, one apparently somewhat larger than the other because the tractive effort is much greater and the weight on the drivers is shown as much greater. Which of the two?

A. The second one, which indicates a tractive effort of 43,660 pounds.

Q. Have you any locomotives corresponding generally to the Mountain type there?

A. Yes, our L engine is of the same wheel arrangement, although somewhat greater capacity as regards the tractive effort.

Q. Are these types that you referred to presently in service?

A. They are. A small number of the ten-wheel engines are in service on branch lines.

Q. And the K and L types to which you referred, are those in branch and main line service?

A. Yes, sir.

[fol. 237] Q. Have you any other locomotive not corresponding exactly in wheel arrangement but generally in tractive effort to those in the exhibit before you, No. 6?

A. Yes, we have a passenger known as the Hudson type or type J.

Q. What is its wheel arrangement?

A. 4-6-4.

Q. Under the Whyte system?

A. 4-6-4, with a tractive effort of 53,960 pounds.

Q. Now, referring to No. 5, the freight locomotive exhibit, I will ask you the same question as to the types of freight locomotives, whether you have any corresponding to those there or have had, and if they are now in service?

A. We have in service an engine known as the Class H, which corresponds to the Mikado type engine with the 2-8-2 wheel arrangement. Our tractive effort is somewhat greater than that of the engine shown in the exhibit, but it is of the same general type.

Q. Do you have a freight type of locomotive corresponding to the so-called 2-10-2 engine, either large or small there?

A. No, sir.

[fol. 238] Q. Mr. Wright, have you made a particular study of the freight train operations over certain portions of the New York Central System during a recent period?

A. Yes, sir.

Q. What was the period studied?

A. It was ten days in the month of September, 1940.

Q. And what particular documents or records of your company did you study for the purpose of this freight train operation study?

A. What we call our dispatching sheets that are in use by our train dispatchers on the different divisions.

Q. Are your train dispatching sheets a permanent record of the company?

A. Yes, sir.

Mr. Mason: Your honor, we have here a sample of a train sheet of the New York Central. I am going to produce it for your inspection, but if it is agreeable to Mr. Strauss and yourself, I will forego offering it in evidence.

Q. Now, Mr. Wright, is it your understanding that the dispatchers train sheets are a particular form, certain essentials of which are prescribed by the Interstate Commerce Commission?

[fol. 239] A. Yes, sir, we are required to show certain information in the train sheets, but some of the detail as to the names of the stations and so on, is left to the local properties.

Q. What is actually recorded on the train sheets and by whom?

A. The records on the sheets are all made by the train dispatcher. At the top of each column is indicated the name of the conductor, the name of the engineer, the engine number, and in the case of passenger trains the number of cars of each particular type; and in freight trains we record the number of loaded and empty cars, and the tons; then certain information as to the time the crew went on duty, the time they were relieved from duty, and the time their sixteen hours would expire. Then follows the names of the stations and times are entered opposite those stations, and those times are the passing times of the trains by those stations.

Q. Then do I understand the dispatcher's train sheet when completed is a record of the movement of each train over the division covered by the sheet?

A. That is correct.

Q. And what period of time is covered by a train sheet?

[fol. 240] A. Twenty-four hours.

Q. From what hour to what hour?

A. A calendar day, midnight to 11:59 P. M. Of course, a train sheet which starts from the terminal at 10:00 o'clock in the evening would be carried through on this

same sheet, although it would arrive at its destination on the next calendar day.

Q. You say a train would start at 10:00 P. M.—

A. Yes.

Q. —would show two hours on the train sheet of that particular day?

A. It would be carried on it all the way through until it arrived at its destination.

Q. You follow the same rule as stated by the witness Sines in his testimony, of treating a unit as it passes a freight division point as a new train for purposes of the dispatcher's train sheet?

A. Yes, sir.

Q. Then for a 10-day period there would be ten of these sheets for each division studied?

A. Yes, sir, there might be more than ten sheets because of our divisions are divided into two dispatching districts. Then there would be two sheets.

Q. There would be a sheet for each dispatching district?

A. Yes, sir.

[Vol. 241] Q. Now referring you to Exhibit No. 10, I will ask you if the black lines, the heavy black lines of your system shown on that exhibit are the districts which you studied for the 10-day period in September?

A. Yes, sir.

Q. And about how many separate districts are included within that, the territory outlined in the heavy black lines?

A. Nine dispatching districts—ten dispatching districts.

Q. Now, having made this study of the operation of trains over a 10-day period, did you prepare or have prepared an exhibit showing typical examples of the freight trains thus operated?

A. Yes, sir.

Q. And have you a statement before you bearing the title, "New York Central Railroad, Typical Example of Freight Trains Handled?"

A. Yes, sir.

Q. Is that the result of your study of the 10-day period?

A. Yes, sir.

Q. Prepared by you or under your direction?

A. Yes, sir.

Q. Did you personally examine the train sheets to which [fol. 242] you have referred?

A. Yes, sir, I had the trains tabulated from each sheet. Then I checked this tabulation against the sheets to see that the information shown here was correctly transcribed.

Q. I notice that the—

Mr. Mason: Before I go further, may we have the statement—I think it is now in the hands of counsel and the Clerk—marked the next exhibit in order?

The Clerk: 13 for identification.

The Court: Gentlemen, we will take a brief recess at this time.

[fol. 243]

(After Recess)

3:20 p. m. Nov. 25, 1940.

AFRED H. WRIGHT resumed the stand.

Mr. Mason:

Q. Mr. Wright, referring to defendant's Exhibit No. 13 for identification, what are the names of places which are shown as Columns B and C with reference to operating divisions?

A. Southport, New York to DeWitt is the first run indicated on the exhibit. Southport is a yard—

Q. Aren't you looking at Sheet No. 2?

A. That is right. The first entry on the report is Malone to Watertown, New York. Malone is located in northern New York near the Canadian border and is located a distance of 112 miles from Watertown.

Q. I was going to ask you particularly this, whether or not these locations are points in Column B at which freight trains originate and points in Column C at which those trains terminate?

A. That is correct.

Q. Generally the originating and terminating points of runs of freight trains over dispatchers, districts or divisions?

A. Yes sir.

Q. The distance in miles in Column D are the distances between those points?

[fol. 244] A. Yes sir, the distances between B and C.

Q. Are those distances in miles shown on the train sheets?

A. Not in exactly that manner but they can be computed from the column on the train sheet next to the name of the station.

Q. By adding the intermediate figures between terminal points?

A. Yes, by adding and subtracting.

Q. Are you familiar with these distances here from your knowledge of the railroad?

A. Generally, yes, but exact I might have to refer to the exhibit.

Q. Of course Column E is the operating study which you have already referred to?

A. Yes.

Q. Where do you get the information in Column F?

A. From profiles on file in each division office prepared by our Maintenance of Way Department.

Q. Is the Maintenance of Way Department under your supervision?

A. No sir.

Q. Are they accessible and available to you as assistant general manager?

A. Yes sir, and posted in all train-dispatching offices. [fol. 245] Are they permanent records of the company?

A. Yes sir.

Q. Are you familiar as assistant general manager with the ruling grades which prevail generally in the districts under your supervision?

A. Yes sir.

Q. Do these figures in Column F correspond to your own personal knowledge?

A. Yes sir.

Q. From what source did you take the information in Column G?

A. From the train sheet.

Q. And Column H?

A. From the train sheet.

Q. And Columns A, B, C and D, where do you get the information—by the way, what do these indicate?

A. Those indicate (a) the perishable loads; (b) other loads; (c) empty cars, including caboose, (d) the total of all cars.

Q. Is that the average consist for example in the line reading from Malone to Watertown, the average consist of these

three trains which operate with a Mikado locomotive and contain 70 cars or less?

A. Yes sir.

[fol. 246] Q. What does Column M indicate?

A. The tonnage of that train.

Q. Is that taken also as an average?

A. That is taken from the train sheet and is the average tonnage of those three trains.

Q. Referring to the block consisting of Columns N to T inclusive, was that information as to trains between 71 and 100 cars taken in the same way?

A. Yes sir.

Q. And represents in Columns P, Q, R, S and T the averages of the six trains therein indicated?

A. Yes sir.

Q. Going to the next block consisting of Columns U to Z and then AA inclusive, you show one train operated with a Mikado locomotive?

A. Yes sir.

Q. Does the figure in Column Z indicate the number of cars in that train?

A. Yes sir.

Q. And the figure in Column AA the number of tons in the train?

A. That is correct.

Q. I take it that the same explanation as to sources and the meaning of the figures would apply to each of the other lines and columns?

[fol. 247] A. That is true.

Q. Going to the column on the extreme right of the exhibit headed "Maximum cars per train", Column II. Is that information taken from the train sheet for the period studied?

A. Yes sir.

Q. It indicates what?

A. It indicates the maximum number of cars in any one of the trains included in the four classifications.

Q. Is that inclusive or exclusive of the caboose?

A. That is inclusive.

Q. That is including the caboose?

A. Yes sir.

Q. For example, let's go down to this line which shows in the Columns collectively 126 cars or over. You show 31 trains in Column BB and their average consist. Do I under-

stand that Column II shows that of those 31 trains one had the consist shown in Column II?

A. Yes sir.

Q. Has this exhibit been checked by you against the original source and other information which you have testified as having been used in its preparation?

A. Yes sir.

[fol. 248] Q. On the second sheet I notice a computation at the bottom of the second sheet, total trains and so forth. Were these computations made from the figures shown on the face of the exhibit?

A. Yes sir.

Q. And the totals of the percentages and averages are all capable of computation from the exhibit itself, are they?

A. Yes sir.

Q. Will you say whether or not the statement is correct as reflecting the information shown on the original sources and the other information within your personal knowledge?

A. Yes sir.

Q. Was there any particular reason for selecting the ten day period during September, 1940?

A. No, except this, after being requested to furnish this information I started immediately and had run currently for the ten day period which represented to me an average period of usual conditions in that time.

Q. Does that period reasonably and fairly reflect the ordinary trend of operations over these districts during any particular 12 months?

A. It does.

Q. Will you state whether the exhibit of the conditions [fol. 249] reflected by the exhibit as to the lengths of trains operated and their average consist corresponds generally to your own observation of freight train operations upon the territory under your charge?

A. It does.

Q. And to conditions as reflected in the reports regularly reaching you from your subordinates.

A. That is true.

Q. I take it you are in constant touch with the division superintendent and other subordinate officials in that territory?

A. Yes, sir, we received reports in our office every day of trains handled and cars handled and like information pertaining to the railroad operation.

Q. I think my previous question was whether this was typical of a current twelve-month period. Does it reasonably reflect the conditions during the past several years on the district of the New York Central?

A. I think over a period of years we would find that eight or ten years ago our movement was a little heavier by reason of the greater volume of business.

[fol. 250] Q. Subject to fluctuation in the volume of tonnage handled?

A. It is typical.

Q. You say eight or ten years ago your movement was heavier. Would that mean a greater percent of trains of more than 74 cars than are shown upon this statement?

A. I would say that is true. I might also say that this period selected is one of what you might term average weather conditions too throughout the year.

Mr. Mason: I am about to offer the exhibit, Mr. Strouss. Do you desire to ask any questions?

Mr. Strouss: Yes, I take it that my objections heretofore made, including the last one that it calls for a conclusion of the witness applies to the testimony already given with respect to this exhibit.

The Court: Yes, the record may show the objection made to all this line of testimony.

Mr. Strouss: Mr. Wright, this exhibit 13 for identification, that was prepared by you for the purpose of this trial, was it not?

A. Yes sir.

Q. Or under your direction?

A. Yes sir.

[fol. 251] Q. As you have testified it was prepared from records of the New York Central office?

A. Yes sir.

Q. Are those records here available for cross-examination?

A. They are not here but they are available. They are permanently maintained at division headquarters.

Q. They are not available here for examination at this trial?

A. No sir.

Q. None of the records that you have referred to in your testimony are here available for examination by counsel?

A. No sir.

Q. You have said that you had personal knowledge as to the ruling grades stated here and that they conform to your personal knowledge. How did you gain that personal knowledge?

A. By experience, riding on the railroad and checking the loading of trains which was part of my duties.

Q. You mean by riding on the train you can determine the per-cent of grade?

A. Not the exact percentage but I do know the general location of ruling grades and for the exact percentage of [fol. 252] grade I must consult the engineering records.

Q. And that is where you actually gained the information that you have concerning ruling grades?

A. Yes sir.

Q. You testified that this truly reflects your observation as to the operation of trains during the 12 months period. How did you gain that observation or information?

A. From the fact that our car movement during that period was about what I would call normal.

Q. You gained it through reports made to you, records of your company, isn't that true?

A. Yes sir.

Q. That is the way you obtained the information you have?

A. That is true.

Mr. Strouss: We make the same objection to this exhibit.

The Court: Same ruling, it may be admitted.

(Document received in evidence and marked Defendant's Exhibit No. 13.)

Mr. Strouss: And the further objection, I notice this is headed "A typical example of freight trains handled" as calling for a conclusion of the witness and his testimony as to it being typical as a conclusion.

[fol. 253] The Court: That objection is overruled.

Mr. Mason: May it please Your Honor, it is possible we shall desire to use this specimen of a train sheet as a typical example of a train sheet in connection with some of the other testimony and for that reason I should like to have it marked for identification.

The Court: It may be marked.

(Document marked for identification as Defendant's Exhibit No. 14).

Mr. Mason: Defendant's Exhibit No. 14 for identification is a dispatcher's train sheet for New York Central Railroad Company, Hudson Division, and indicates that it is between the points of Croton-on-Hudson at mile post 33.67 and Signal Station S.N. north of Troy at mile post 132.01.

Q. Now, Mr. Wright, from your experience will you state what factors in general determine the number of cars to be placed in a freight train handled on the New York Central?

A. The main factor with us in our main line operation is the amount of business that is offered for the train. Nearly all of our freight train service today is what is known as "manifest" service with symbol trains. The service demands are such that these trains must be operated almost [fol. 254] every day regardless of the tonnage available.

Q. Are they operated on time schedules?

A. Yes sir.

Q. With stated departure and arrival times?

A. Yes sir. Those times are not made part of a timetable but they are published and given to shippers and receivers as a service we offer between given points. Our train loading—we have no definite orders, either in tons or cars as to the limit of which a train may be loaded, but we have found from experience that 125 to 130 cars is about the maximum we can handle and maintain the schedules. For that reason we seldom pull cars in excess of that. Our train loading of course is also subject to weather conditions during the winter months when we sometimes have to operate a symbol train in two sections that would under fair weather conditions be operated in one train.

Q. Do I understand that the amount of tonnage to be handled rather than any other particular factor is the primary factor in determining the length of the train to be operated?

A. That is true.

Q. And it is the amount of tonnage rather than the number of cars in which that tonnage is loaded which determines the length, is it not?

[fol. 255] **A.** Yes sir, up to the limits I have mentioned of 125 to 130 cars, which is practically the limit with which we can make the time.

Q. What factors in general determine the number of cars in passenger trains?

A. We have a limit of 18 cars on our passenger trains which we have found by experience is about the maximum number we can handle and make the scheduled time.

Q. Is there any other factor than the 18 car maximum which determines the number of cars in a particular passenger train unit?

A. No, we aim to handle all the cars we can, that is, when we have the business and still maintain the schedule. The Court: You say 18 cars is the maximum?

A. Yes sir.

Mr. Mason:

Q. You don't normally operate in excess of 18 cars in a main line passenger train?

A. No, we hold them to 18 cars because we can't make the schedule with a greater number.

Q. Do you have on the New York Central a rule prohibiting the use of more than one engine on a train in default of a penalty payment to the train crew?

A. No sir.

[fol. 256] Q. Do you have any full crew laws in the states where you operate and if so what is their effect upon your train crews on freight trains?

A. We are operating under full crew regulations practically all over the line east so that our freight trains consist of an engineman, conductor, fireman and three brakemen.

Q. That is your standard freight train crew, engineer, fireman, conductor and three brakemen?

A. Yes sir.

Q. Which includes as I take it the flagman?

A. Yes sir, that meets all full crew requirements.

Q. That is regardless of the length of the train, whether 50 or 130 cars?

A. Yes sir.

The Court: Do I understand in a number of these 13 states in which you operated that they do have what is known as the full crew law that requires six men?

A. Yes sir. I might state that I can't testify for the whole eleven states. The territory over which I have jurisdiction is in the States of New York, New Jersey and Pennsylvania.

Mr. Mason: You satisfy all full crew requirements in those states by the three brakeman crew that you have [fol. 257] mentioned?

A. Yes sir.

Q. Do you occasionally run into zero or sub-zero weather in the territory between Buffalo and New York City?

A. Yes sir, and to the north of our main line much below that.

Q. Do you operate 18 car passenger trains in that territory when the weather is as cold as zero or below?

A. We have operated on our main line 18 cars in extreme cold weather.

Q. Do you operate such trains in weather where the prevailing temperature is below the freezing point of water, 32 degrees?

A. Yes sir.

Q. Customarily?

A. Well, 32 degrees temperature wouldn't affect our loading.

Q. Would zero affect your loading of passenger trains?

A. No, not on our main line of passenger but it would on freight.

Q. Referring to passenger, do you know of any difficulty in heating the rear cars of passenger trains in excess of [fol. 258] 14 cars during the cold weather periods you have described?

A. No sir.

Q. Have you ever experienced any such difficulty according to your knowledge?

A. You mean in forcing steam back through the train?

Q. So the rear passenger car is habitable?

A. I don't know; sometimes it takes a little longer to force steam through at terminals.

Q. When the train was operating between terminals have you known of any difficulty?

A. No sir.

Q. You spoke of the various factors and particularly the factor of tonnage hauled which determines the number of cars to be operated in a freight train. Do those factors produce in the case of freight trains any difference in the lengths of the trains operated on different divisions?

A. Yes sir.

Q. Why is that?

A. As I stated it is the volume of traffic that is offered and available. We for instance have a schedule service, St. Louis to New York, of approximately 50 hours with an established cut-off or leaving time from St. Louis and that schedule is maintained all the way through from St. Louis [fol. 259] to New York. The train might have 65 cars or it might have 100.

Q. Then the length of that train between different division points would depend upon the traffic available to be put into it?

A. That is true.

Q. Referring particularly to freight trains for the moment, does the fear of hazard to any members of the train crew enter into the conditions which dictate or influence the length of freight trains?

Mr. Strouss: We object to that as calling for a conclusion of the witness.

The Court: Will you read the question?

(Last Question read by the Reporter).

Mr. Strouss: That is a back-handed way of asking the question, getting into the matter of safety of operation which we submit is a record of the company, the record of safety on trains of 70 cars or less or over 70 cars. The number of train miles operated by the different type of trains and showing the accidents which are, reports of which are made by the company to the I.C.C. and which they have on their own records.

The Court: I will hear from you on that, Mr. Mason, [fol. 260] Mr. Mason: My question was not whether a particular type of operation is safe or not and whether the management fears hazard to the train crew and as the result of its fear reduces or increases the length of trains. It is not an attempt to circumvent the showing of statistics. We will have ample statistics relative to safety of operation and they will not necessarily be this New York Central Line. We are not trying to circumvent the showing of anything at all but whether the management cuts down the length of the train—

Mr. Strouss: You may have statistical evidence in here as to other roads. This evidence as to the New York Central, if it is not going in the back door, as a matter of safety

what the New York Central does as a matter of safety on their road is immaterial here.

The Court: Under the avowed purpose of the question the objection is overruled.

Mr. Mason: Will you read the question?

(Question read by the reporter.)

A. No sir.

Mr. Mason: Mr. Wright, as a supervising operating officer in your position do you recognize the different between density of traffic on one hand and volume of traffic on the other?

[fol. 261]. A. Personally I do.

Q. What do you understand from your standpoint to be the measure of volume of traffic? What does volume of traffic indicate to you?

A. Volume of traffic indicates to me the amount of tonnage that we handle, our volume of business.

Q. What does density of traffic indicate?

A. Density of traffic indicates to me the number of train movements in a given territory.

Q. Between given points for a given stretch of track?

A. Yes, in a given territory.

Q. Is it correct, to summarize, that density of traffic is measured by the number of train movements while volume of traffic is measured by the number of cars or tons hauled?

A. That is correct, that would be my interpretation.

Q. When volume of traffic increases does the expense of handling the increased volume tend to rise, stated in terms of cost per unit of traffic handled or tend to fall?

A. We should with greater volume be able to make a reduction in our unit cost as a general proposition.

[fol. 262] Q. Referring to increasing density of traffic measured by the number of train units, as density increases does the expense per unit handled tend to increase or decrease?

A. It tends to increase and I am basing that statement on my experience around our harbor terminals in New Jersey and New York City where by reason of the density of the movements our unit costs are probably the highest of any point on our line.

Q. I would like to refer you to Mr. Porter's exhibit No. 12. It is the freight service operating averages for certain calendar years?

A. Yes sir.

Q. Particularly to Item 8. You have certain indexes or other statistics which reveal performance. What place does the figure showing gross ton mile per freight train hour occupy with the indexes which indicate performance?

A. To me the gross ton miles per freight train hour is the best measuring stick we have for efficiency. Shall I expand on that?

Q. If you will please?

A. Authorities generally I believe recognize that statement to be correct. Gross ton miles per freight train hour [fol. 263] is really the product of the tonnage of your train and the speed as measure in miles per hour. For the utmost efficiency it follows we should handle in our trains the greatest amount of tonnage possible and still maintain the speed that we are required to maintain to meet service demands and competition. I have found from experience that if your gross ton miles per freight train hour show up well almost all other features of your operation will show up well.

The Court: There is just one question the Court has on that Exhibit No. 12. If I correctly read from Line No. 3 there on "Freight cars per freight train", the records of your railroad, the New York Central, you show that the average train operated by your company contains 55.2 cars, is that correct?

A. That is correct.

The Court: That takes in I believe all classes of service, through freight, local freight and others which brings the average cars per train somewhat lower than we have been discussing. Are you through, Mr. Mason?

Mr. Mason: Yes, I have finished the direct examination.

The Court: If counsel have no objection we can work on through to make up for some of the lost time.

[fol. 264] Mr. Strouss: My cross-examination will not be very long because I don't have the under-lying records to cross-examine from so my examination of necessity is limited by the type of evidence which is in here.

Mr. Mason: I am willing, if Mr. Strouss desires, that he may defer the cross-examination until tomorrow.

The Court: Well, those records wouldn't be here tomorrow.

Mr. Mason: No.

Mr. Strouss: That wouldn't help me any.

Cross examination.

Mr. Strouss:

Q. Going back, Mr. Wright, to this mileage and single, double and four-track. How much of your main line is single track?

A. When I referred to main line I have referred to territory that is multiple track, two or more.

Q. There is no main line that is single track?

A. No sir.

Q. What type block signal do you use on the New York Central?

A. We have automatic signals and manual block. Gen[erally speaking] we use the manual block for single track territory and automatic signals for two or more tracks.

Q. You were asked by Mr. Mason about the penalty in using more than one engine, that was the so-called double-header rule?

A. Yes sir.

Q. What is that rule on the New York Central?

A. We have no restriction on double-heading.

Q. You have no double-header rule at all?

A. No.

The Court: By that do you mean you do customarily use—

A. Not customarily. On our main line we do very little double-heading but we do double-head on our branch lines such as in the coal regions of Pennsylvania.

The Court: That is where you have steeper grades?

A. Yes sir.

The Court: I notice that your average grade was in most instances below one per cent. Is that true?

A. That is true.

The Court: That means one foot rise in 100 feet?

A. Yes sir.

[fol. 266] Mr. Booth: Do you have any undulating or rolling territory?

A. We have some of that but I wouldn't say to any great extent.

Mr. Strouss: That is hog-backs and dips.

A. No; there are certain locations on certain divisions where we have this roller-coaster effect but not any great amount of it.

Q. That is not on your main line either?

A. No, sir.

Q. Aren't the terms "density of traffic" and "volume of traffic" sometimes used interchangeably?

A. They might be but as I stated they don't mean the same thing to me.

Q. What is the character of the traffic which you handle on the New York Central?

A. Food-stuffs.

Q. What do you mean by "food-stuffs"?

A. Meats, fruits, vegetables; all sort of commodities for human consumption and we also have a considerable amount of what we term "dead freight" such as coal, cement, building material.

Q. Which type of traffic predominates? What is your percentage as to each?

A. I do not think I can give you the percentages but the New York Central is generally considered a merchandise [fol. 267] carrying railroad.

Q. Not a great deal of "drag" freight?

A. That is it.

Q. In your gross ton miles per freight-train hour that tonnage includes that is the gross of the load plus the equipment?

A. That is right.

Q. To get the tonnage of the load would be the next ton mile?

A. That is right.

Q. Mr. Porter testified that you had some electric and Diesel locomotives. Do you use any of those except in yard operation?

A. Yard operation for what I will term the straight Diesel engine. We use a considerable number of those. I think we have about 29 in the Buffalo territory. In the New York territory we have combination locomotives that

we term Diesel locomotives but they are also electric locomotives and also operated from storage battery. In other words, this engine when it is on a section of road where the third rail is available the third rail shoes are lowered and the locomotive operates as an electric engine. When we are in territory on the west side of Manhattan where there is no third rail it is Diesel operation and those [fol. 268] particular locomotives are also equipped with storage batteries to work in the interior of buildings where we are under-ground. In such location they operate from the storage battery.

Q. Do any of those operate outside of yards?

A. Yes, the New York engines that I referred to operate from the lower west side of Manhattan to Harmon, a distance of 33 miles.

Mr. Strouss: That is all.

Re-direct examination.

Mr. Mason:

Q. I take it from your answer to the Judge and Mr. Strouss that you use the double-header largely if not almost entirely for limited purposes in territories where help is required?

A. That is true.

Q. What we call "helper districts"?

A. That is true.

Q. For example to push a train out of a yard where there is a heavy grade out to the main line.

A. That is true and as I mentioned in our mining regions we have some heavy grades for reasonably short distances and there we double-head.

Q. That is the mountainous region of Pennsylvania? [fol. 269]

A. Yes, the coal region.

Q. You spoke also of the character of traffic that you handle. The New York Central handles a rather substantial volume I take it of machinery and manufactured and industrial products generally?

A. That is true.

Q. You also handle a considerable volume of perishable, do you not?

A. Yes sir.

Q. Is that to some extent originated on your line?

A. Some of it. We have a fruit district in the Lake

Ontario region where apples and peaches are grown and I believe lettuce was mentioned this morning. We have a lettuce growing district where during the season there is quite a heavy shipping of lettuce and celery.

Q. Do you handle livestock as well as meats?

A. Yes sir, we have daily movement of livestock into New York.

Q. Do you serve livestock producing areas in the middle west?

A. I can't answer that, I am not sufficiently familiar with the western lines.

Q. Does your company deliver perishables at the important eastern terminals?

A. Yes sir.

[fol. 270] Q. It maintains switching delivery service for that purpose?

A. Yes, sir.

• Mr. Mason: I think that is all.

(Witness excused).

Mr. Mason: If we are going to be referring to this double header rule, I was going to make that statement to the Judge but being familiar with the rules of agreement in effect on the Southern Pacific Company and in general on western railroads but not eastern railroads with relation to using more than one locomotive on a train, the rule, I am not attempting to quote it verbatim, provides that with trains of more than 40 cars two engines or more will not be used except in districts designated as helper districts where the tonnage in the train exceeds the tonnage rating of the largest locomotive in the train or if two engines are used under those conditions and except in helper districts the conductor and the brakemen on the train will be paid double miles, that is, twice what they ordinarily are paid. The rule is a penalty rule and operates to prevent the use of two engines on heavy trains where the tonnage of one locomotive is exceeded, except as I say in districts designated as helper districts and these helper [fol. 271] districts are those where grades and other conditions are such that the trains in other territory may be handled with one engine cannot be moved except with the assistance of one or more additional engines. As to tonnage ratings, those again are determined I think by the

Mechanical Department and the tonnage ratings for the various types of locomotives designated by their nominal designation and their numbers are printed in the employe's time tables with the points between which and the direction in which such tonnage ratings apply. To cite a specific example, the district between Tucson and Maricopa is not helper territory and if we were to operate a train in either direction between those two points with tonnage greater than the rating of one locomotive and were to attach another locomotive in order to move the train we would pay double miles, but the district between Tucson and Dragoon eastward is helper territory and an additional locomotive may be used without the penalty.

The Court: I see. I take it that the hour is such that we wouldn't be justified in starting a witness tonight. The Court will stand at recess until ten o'clock tomorrow morning.

(Court recessed until 10:00 A. M. November 26, 1940).

[fol. 272]. Tuesday, November 26; 1940. 10:00 A. M.

All parties being present as heretofore noted, proceedings were resumed as follows:

The Court: You may proceed. Call your first witness.

Mr. Mason: Call Dr. Parmelee.

J. H. PARMELEE called as witness on behalf of the defendants, having been first duly sworn, was examined and testified as follows:

Direct examination.

By Mr. Mason:

Q. Will you please state your name, residence, and employment, Dr. Parmelee?

A. My name is J. H. Parmelee. I am Director of the Bureau of Railway Economics of the Association of American Railroads, with headquarters at Washington, D. C. I have been connected with that Bureau since 1911, and have been its Director since 1920.

Q. What is the Association of American Railroads, Doctor?

A. The Association of American Railroads was organized by the railroads in 1934 and is an amalgamation of

the American Railway Association, the Bureau of Railway Economics and certain other closely allied railway organizations. The Association represents practically all the railroads in the Class I group, numbering among its members companies which operate approximately 99% of the mileage of that group of railways. Railways of Class I are those which according to the classification of the Interstate Commerce Commission earn annual operating revenues of \$1,000,000 or more.

Q. By "operating revenues" you mean the gross operating revenues without regard to the expenses?

A. Yes, the gross receipts from all transportation sources.

Q. And the designation of Class I railways is a designation originating with the Interstate Commerce Commission?

A. Yes, that is according to the classification laid down by the Commission.

Q. Can you state the number of Class I railways as of the year 1939?

A. There were approximately 137 Class I railways operating last year. The number changes slightly from year to year.

Q. What is the function of the Association in its representation of the railway industry?

A. The Association of American Railroads acts for the [fol. 274] railway industry in all matters where concert of policy and action are appropriate. It consists of several departments which deal with operations and maintenance, traffic, accounting, legal matters and many other subjects. The several departments of the Association regularly obtain data in the respective fields from individual railroad companies, summarize and analyze that data, and put their findings to such use as may be for the best interests of the Industry. Members of the staff of the Association frequently appear and offer testimony on behalf of the Industry as a whole before Congressional Committees, before the Interstate Commerce Commission and before State Legislatures and state regulatory bodies, before the courts and before other official bodies.

Q. Now, will you address yourself particularly to the Bureau of Railway Economics of which you are the Director, and state its functions and purposes?

A. The Bureau of Railway Economics was organized by the Railways in 1910 and has been maintained by them for the primary purpose of the scientific study of the economics of transportation. The functions of the Bureau are of three types; first, compilation and publication of statistics dealing with the business and operation of the [fol. 275] railways for whom it acts as a clearing house in such matters; second, maintenance of an extensive library on transportation and economic subjects open to all persons who may wish to consult material of that nature; and third, continuing study by the Bureau staff of the developments of current importance in the field of transportation.

Q. Now, I understand that you became associated with the Bureau in 1911?

A. Yes, sir.

Q. Dr. Parmelee.

A. Yes.

Q. What was your academic training and experience prior to your going with the Bureau?

A. I graduated from Yale University in 1904 and later took a graduate course in Economics and Statistics, receiving my degree of Doctor of Philosophy in that major subject six years later. On graduation I was appointed to a teaching position at Yale and taught Economics there for three years. Following that I went to Washington as the result of a Civil Service examination for general examiner, joined the staff of the Interstate Commerce Commission where I remained for nearly three years. At the Commission I occupied a position which today would be classified [fol. 276] as an Examiner with the Bureau of Accounts of the Commission, although at that time the Bureau of Accounts had not yet become a separate bureau of the Commission. I resigned from the Commission staff after nearly three years of service, had two or three other different appointments with several Government Bureaus, including the United States Census Bureau, the United States Immigration Commission and the United States Conservation Commission, following which I was appointed as the Statistician of the Bureau of Railway Economics in 1911, which had just been organized. I have been a member of the staff of the Bureau since that date.

Q. What has been the nature of the action of the Bureau of Railway Economics since its organization in 1910?

A. The Bureau of Railway Economics, as I have already stated, has acted as the statistical clearing house for the Railroad Industry in addition to the regular compilation and publication of data with respect to railway revenues and expenses, railway traffic, railway capital expenditures, purchases by the railways of fuel, materials and supplies, railway operating statistics, the number and compensation of railway employees, and other similar factors. In carrying out the Bureau's activities, the Bureau obtains from the carriers from time to time such statistics as may be desired. As Director of the Bureau I appear as a witness on behalf of the Railroad Industry in practically all matters involving the Industry as a whole.

Q. Has your appearance in such matters included your participation in the hearings involving matters dealing with train limitation, for the purpose of limiting the length of freight and passenger trains or either?

Mr. Strouss: I object to that as immaterial.

The Court: Objection overruled. He may answer.

A. Yes, I have appeared in a number of rather widely separated cases involving train limitation.

Mr. Mason:

Q. Have there been such bills introduced in Congress in connection with which you have appeared?

A. Yes.

Q. Have hearings been held before Congressional Committees in which you have appeared?

A. Yes, a number of hearings.

Q. Will you state when those were held and in connection with which bills?

A. During the past few years a number of bills have been [fol. 278] introduced in Congress seeking to limit the length of freight and passenger trains, and extensive public hearings were held by Congressional Committees considering these bills. First, in April and May, 1934, before a sub-committee of the Senate Committee on Interstate Commerce with respect to Bill S-2625, 73rd Congress, 2nd Session; second, in June 1935 before a sub-committee of the Senate Committee on Interstate Commerce with respect to bills S-27 and S-344, 74th Congress, First Session; third, in

January, February and March, 1938 before the entire committee on Interstate and Foreign Commerce of the House of Representatives, considering Bill S-69, 75th Congress, Third Session. None of these bills was enacted as a law. I appeared as a witness at each of the hearings opposing the bills on behalf of the railroads.

Q. Have there been bills introduced in the States in connection with which you have appeared or furnished information.

A. Yes.

Q. Will you briefly recount what has happened in the several States.

Mr. Strouss: May I have the record show an objection to all of this?

The Court: Yes, the record may show the objection and [fol. 279] it is overruled.

Mr. Mason: I might say that this is merely a part of the witness' qualifications, to show his experience.

The Court: I understand that.

Mr. Strouss: The question of the action of legislative bodies is not a part of his experience.

Mr. Mason: That is a part of his knowledge.

Mr. Strouss: Not a part of his experience to qualify him as a witness.

A. With respect to the states, from 1923 to 1940, inclusive, a total of 144 bills designed to limit the length of freight and/or passenger trains were introduced in the legislatures of thirty-five different states. In only three states were these bills enacted into law; Nevada in 1935, Louisiana in 1936, Oklahoma in 1937. In none of these three states was the law ever in force.

Mr. Polley: We object to that, if the Court please.

Mr. Strouss: That is certainly not going to his qualifications.

The Court: Well, we are probably getting a little beyond the border-line on that. I will sustain the objection.

[fol. 280] Mr. Strouss: We ask that that part of the answer be stricken, that part of the testimony.

Mr. Mason: As to whether the laws have become effective.

The Court: Yes, that may be stricken.

Mr. Mason: Very well.

Q. Do you know whether the law in Nevada was ever challenged?

Mr. Polley: We object to that, if the court please, upon the same grounds and for the same reason.

The Court: Objection overruled.

Mr. Mason:

Q. Did you appear in the proceedings in which the Nevada law was challenged?

A. Yes, I appeared as a witness in the Nevada case on behalf of the Southern Pacific Company and certain other railroads that were interested in that proceeding.

Q. Is that the case of Southern Pacific Co. vs. Nashburn, which is reported in the Federal Reporter in the 8 Fed. Sup., do you know?

A. Yes, I think that is the reference.

Q. Do you know whether the Louisiana law was ever challenged?

A. Yes, it was.

Q. Did you participate in those proceedings in any way? [fol. 281] A. Yes, I did.

Q. In what way?

A. In the case of the Louisiana proceeding my activity consisted in the preparation of rather extensive affidavits and filing those affidavits as a part of the proceedings.

Q. Do you know if there were any oral hearings or testimony in the Louisiana case?

A. I can't answer that question. I did not participate in them, if there were.

Q. Now, as to the Oklahoma law, do you know whether or not that law was challenged?

A. Yes, that law was challenged.

Q. Did you participate in the proceedings in the cases in which that law was challenged?

A. Yes, I did, also through the preparation and filing of certain affidavits.

Q. Do you know whether there has been any hearing on oral testimony in that case?

A. I am afraid I can't answer that question.

Q. Have you made or do you make studies and analyses of matters involved in train-limit litigation, and if so, what?

A. My study and analysis of train-limit proposals have

approached the question principally from an economic and [fol. 282] financial standpoint, and primarily from the standpoint of the industry as a whole. However, the principles which I shall develop here, based on those studies and analyses, apply with equal force to all train-length limitation matters, whether state or national in scope, whether already on statute books or in the form of legislative bills.

Q. Have you made a study of the capital expenditures undertaken by the railroads of the United States during the recent period as indicated by the statistics issued by the Interstate Commerce Commission?

A. Yes, I have.

Q. Has there been any substantial increase in capital expenditures for the purpose of augmenting or improving the railroad physical properties in the United States since 1922?

Mr. Strouss: Just a minute, we make the same objection as we made yesterday. This is immaterial, incompetent and irrelevant. It is not the best evidence, calls for a conclusion of the witness.

The Court: The objection is overruled. You may proceed.

(Question read by the reporter.)

A. Yes, a considerable program of that nature has been [fol. 283] under way since the spring of 1923.

Q. What was the occasion which led up to the inauguration of that program?

Mr. Strouss: May our objection, without repeating it, go to all this testimony?

The Court: The record may so show.

A. During and following the World War of 1914 to 1918, unusual demands on railroad facilities taxed the rail plant beyond its then capacity. Periodic car shortages disrupted the smooth flow of trade and commerce. Operating costs per unit of traffic were high and the speed and dependability of service was not up to the standards required of modern transportation. Some of the development of that period lay outside the control of railroad management, but the industry recognized its obligation to clear up the situation.

Q. What steps were taken in order to discharge that obligation?

Mr. Strouss: There is a further objection. I think the witness should identify the railways he is referring to, because, of course, in our objection we object on one ground that this testimony is irrelevant and immaterial because there is no showing of similarity of conditions.

The Court: Well, he may identify them.

[fol. 284] Mr. Mason: To what railways do you refer, Doctor, when you speak of the railway industry?

A. I am referring throughout to the group of railways to which I have already referred and described, namely, the railways of Class I, those which operate something more than 90% of the total mileage of the United States and earn about 97% of the total revenues of all railways in the United States.

Q. Are those railways which contribute to and are members of your Bureau of the Association?

A. Yes, I have already stated that 99% of the mileage of the Class I group have membership in the Association and contribute to the Association and our Bureau.

Q. Then I take it, when you are speaking, that the railways of which you are speaking, represent broadly stated, the National Railway Transportation System, excluding unimportant short lines which do not enter into the Class I?

A. Yes, I think that is a fair statement, excluding more or less local and short lines.

Q. Is the Southern Pacific a railroad of Class I, if you know?

A. Oh, yes.

Q. Is it a member of the Association?

A. Yes, and has been such from the beginning.

[fol. 285] Q. What is the fact as to the Atchison, Topeka and Santa Fe Company?

A. That is a member and has been from the beginning.

Mr. Mason: May we stipulate that hereafter we may refer to that as the Santa Fe?

Mr. Strouss: Yes.

Mr. Mason:

Q. I will ask you as to certain other railroads, whether they are likewise Class I railways and members of the Association. If they are neither or both, will you so indicate? The New York Central?

A. Yes, that is one. It is both a Class I railway and a member of the Association.

Mr. Booth: You might include in your answer whether they have been from the beginning to save repeating.

The Witness: The answer is "yes" to all those questions.

Mr. Mason:

Q. The Boston & Maine?

A. Yes.

Q. The Pennsylvania & Erie?

A. Yes.

Q. The Illinois Central?

A. Yes.

Q. The Chicago & Northwestern?

[fol. 286] A. Yes.

Q. The Chicago, Milwaukee, St. Paul & Pacific?

A. Yes.

Q. The Northern Pacific?

A. Yes.

Q. The Great Northern?

A. Yes.

Q. The Missouri Pacific?

A. Yes.

Q. The Union Pacific?

A. Yes.

Q. The St. Louis & Southwestern?

A. Yes.

Q. The Chicago, Burlington & Quincy?

A. Yes.

Q. The Chicago, Rock Island and Pacific?

A. Yes.

Q. The Chesapeake & Ohio?

A. Yes.

Q. Now, reverting to a question which I had asked you before and which was not followed up, in order to discharge the obligations which you have described, what steps were taken, if you know, by the railroad industry or its representatives?

A. Railroad executives of Class I railways in the Spring of 1923 formulated and inaugurated a continuing program [fol. 287] designed to rehabilitate and modernize the entire rail plant. This involved not only the physical fitness of the plant but also an increase in the unit output of rail facilities. The primary objective of the program was to provide equipment and facilities capable of handling mass

transportation with the smallest possible number of units, that is, cars and trains. To that end railroads installed new locomotives and cars of modern design and greater unit-hauling and carrying capacity. They retired obsolete equipment units from service. They laid millions of tons of heavier rail. They renewed and strengthened roadbeds. They reduced curves and grades. They rebuilt or replaced bridges, trestles and culverts. They greatly extended signalling systems and safety devices. In every way they remodelled the rail plant to permit, where conditions were favorable, use of trains of greater carrying capacity and moving at a greater average speed between terminals. During the first year of the improvement program, 1923, more than \$1,000,000,000 of gross expenditure was made on capital account. During the 17 years ending with 1939 the total was approximately \$9,000,000,000.

Q. Doctor, have you prepared an exhibit showing the gross expenditures for additions and betterments to rail-
[fol 288] way properties, railways of Class I in the United States?

A. Yes, for this period that I have mentioned, 1922 to 1939, inclusive.

Mr. Mason: We ask that the statement which has been circulated be marked as Defendant's next in order for identification.

The Clerk: Defendant's Exhibit 15 for identification.

Mr. Mason:

Q. Was Exhibit 15 for identification prepared by you or under your direction, Doctor?

A. Yes, it was prepared in my office and under my direct supervision.

Q. And from what source was the exhibit prepared?

A. The source which is indicated at the foot of the exhibit is the lengthy official statistical report published by the Interstate Commerce Commission each year, and known as "Statistics of Railways in the United States." The foot-note I referred to indicates the exact pages of that report from which these statistics were taken year by year.

Q. Now, are the figures shown on this exhibit the exact counterpart of the figures appearing on the face of the

publication of the Interstate Commerce Commission to [fol. 289] which you refer?

A. Yes, each of those figures has been taken direct from the noted page of the Commission's report.

Q. Omitting, of course, the totals which you show for the two nine-year periods?

A. Yes, that is correct.

Q. Those are your own additions?

A. The sub-totals and totals shown on the sheets are my additions.

Q. Have you available here in the court room one or more of the lengthy publications by the Commission to which you referred and from which these figures are taken? Now, information reaches us, that they are all here.

Mr. Mason: And if your honor please, we hereby tender them to counsel for the plaintiff for their examination, if they so desire either presently or at any time during the presence of the witness on the stand.

The Court: That is, if I understand it, the original reports from which these figures shown on Defendant's Exhibit 45 are taken, are now produced by you in open court.

Mr. Mason: The original publication by the Interstate Commerce Commission, the publication for the year 1938 [fol. 290] I am now submitting for the examination of counsel. If I may have the publication for the year 1937, I will be glad to place it before your honor to show just what it is.

Mr. Booth: Of course, we don't want these taken up to Phoenix. They will be available here in our office for examination, but we are using them currently for other purposes.

Mr. Mason: Placing before your honor the document for the year 1937, which bears the title, excluding the reference to the serial number, "Statistics of Railways in the United States," as referred to by the witness.

Q. Is the publication "Statistics of Railways in the United States" a publication gotten out annually by the Interstate Commerce Commission and made available to those who are interested in it, Doctor?

A. Yes, that has been published each year since the year 1888, the year succeeding the passage of the Interstate Commerce Act of 1887.

Q. Will you say whether or not the publication is in your experience generally used by statisticians interested in the railway industry?

A. Oh, yes.

Mr. Strouss: We object to that as immaterial, if the court [fol. 291] please.

The Court: Note the objection. Overruled. He may answer.

A. Oh, yes, it is the publication most often used by students of transportation both in the Universities, colleges and in general business, and of course, in the transportation field itself it is the outstanding source of railway information.

Q. Do you know from your experience with the Commission upon what information the Commission's report is based, the Commission's publication is based?

A. Yes, I was assigned to work on this particular report at the time I was a member of the staff of the Interstate Commerce Commission, and at that time had some connection with the preparation of the so-called classifications of the Commission, that is, their rules and regulations dealing with railroad accounts and railroad statistics. Each year each railroad subject to the Interstate Commerce Act files under oath a report, an annual report to the Interstate Commerce Commission on certain forms which are prescribed by the Commission, and those reports are carefully checked by members of the Commission staff and the returns contained in the reports are then, after thorough re-[fol. 292] view and checking, are then assembled and tabulated. Those for Class I are tabulated in one group, for the smaller classes of railroads in another group, and so on. The Class I statistics which appear in Exhibit 15 are those of the Class I group, which have been tabulated by the Commission and are then published by the Commission's staff in the statistics of railways.

Q: Now, returning to Exhibit 15 for identification, Doctor, has the exhibit been checked to determine whether it is a correct reproduction of the figures appearing in the original sources to which you have referred?

A. I have personally made what is known as a "spot check" of this, that is, taken certain sample figures and checked them back to the original sources, and in my opin-

ion it is a correct copy of these figures from the Commission's reports.

Mr. Mason: We offer the exhibit in evidence as Defendant's Exhibit 15, and I will withhold the offer until Mr. Strouss or Mr. Polley have had a chance to examine it, if they so desire.

Mr. Strouss: We make the same objection we made to the other exhibits.

The Court: Objection overruled. The exhibit may be admitted in evidence:

[fol. 293] The Clerk: Defendant's Exhibit 15 in evidence.

Mr. Strouss: I think perhaps the character of this material, which is available here should be more definitely identified in the record as the printed publication of statistics of railways in the United States, each year published by the ICC and not a certified copy of any record of the ICC.

Mr. Mason: No, I think we can agree that the underlying documents from which the underlying reports—from which the exhibit has been prepared—is a published statistical report in book form, printed at the United States Government Printing Office, bearing as its title, "Prepared by the Bureau of Statistics" and having on its title page the facsimile seal of the Interstate Commerce Commission, and the sample which I have before me bears the title, "Fifty-First Annual Report on the Statistics of Railways in the United States for the year ending December 31, 1937." And I think that we can also agree that the Commission, as the witness testified, issues an annual report of this type for each calendar year, and has so done since it was first organized.

Mr. Strouss: Yes, I am not questioning that.

Mr. Mason: I assume that plaintiff's counsel are as familiar with this report as we are. As the witness has [fol. 294] said, it is a matter of common and current use among those who are interested in railway statistics and railway operations.

Mr. Strouss: There is one question I would like to ask Dr. Parmelee.

Q. The method of preparing this volume of annual sta-

statistics of railways is set forth in the volume itself, isn't it, Dr. Parmelee?

A. May I ask what you mean by "method"? I am not sure that I understand your question.

Q. How the Interstate Commerce Commission goes about preparing this report?

A. I don't believe that the Commission goes into all that detail in its own report here, but as to the classifications, if that is what you mean, that is the rules and regulations which the Commission lays down to the railways to guide them in the preparation of the original returns, those are very fully set out by the Commission, but in separate documents from these statistics of railways.

Q. Doesn't the introduction of each of these volumes outline or indicate the manner in which the volume was prepared?

A. In a rather general way, yes, that is true. That is, there is a definition of certain terms and there is an explanation of what is meant by Class I railroads, and the geographical distribution that is used in the statistics is explained, and so on. Other general matters of that kind. Perhaps I did not understand your question.

Q. That is what I was referring to, Doctor.

A. Yes, that is correct. I am sorry I did not get your question.

Mr. Mason:

Q. I notice that you have shown the year 1922 on Exhibit 15. Will you state why that is?

A. Yes, the improvement program to which I referred was inaugurated in the Spring of 1923, and in order to get a background for that program, I included the complete year 1922 in this series in order that the comparison and contrast between that year, the following year, 1923, which was the first year of the program, and succeeding years, should be rather clearly brought out.

[fol. 296] Mr. Mason: Will you state from the exhibit and from computations what the aggregate expenditures for additions and betterments were during the eighteen year period covered and what the average per year was.

A. As I have already stated this exhibit 15 relates only to railways of Class I and it covers gross expenditures for additions and betterments. The phrase "additions and

betterments" has a rather definite connotation in the commission's report. It doesn't include what are known as expenditures for new lines and extensions. In other words, for the building of new railroad lines, extension of track into new territory, expenditures of that kind are not included. This exhibit only includes the additions and betterments on existing property, that is, improvement of the existing plant. With that in mind I would like to call attention to certain statistics in the exhibit.

Q. Will you proceed.

A. During the eighteen years as a whole, 1922 to 1939 inclusive, additions and betterment expenditures aggregated \$9,363,427,000.00, an average of \$520,000,000.00 per year. Three-quarters of the total expenditure was made during the first nine years period when annual expenditures averaged \$785,000,000.00. The effect of the economic [fol. 297] depression reduced that annual rate of expenditure by about two-thirds.

Q. As to equipment expenditures, do you wish to mention those figures?

A. The equipment expenditures which are shown in the first figure column of the exhibit include purchases of new locomotives and freight and passenger cars. These expenditures aggregated four and one-half billion dollars over the eighteen-year period or 48.3 per cent of the total which was expended for all classes of additions and betterments. Equipment expenditures averaged \$251,000,000.00 per year for the eighteen years as a whole and averaged \$377,000,000.00 per year during the nine years 1922 to 1930 inclusive.

Q. As to the expenditures for improvements and betterments to the fixed property?

A. The expenditures on roadway and structures so-called included expenditures for heavier rail, additional main track, additional and heavier ballast, new or improved shops and engine houses, stations and office buildings, new or improved bridges, trestles, and culverts, improved signaling and interlocking devices, and many other items of that general class.

[fol. 298] Q. Would that include extensions of sidings, for example?

A. Oh, yes, if those sidings were extended from presently operated tracks or lines they would be included.

Q. What was the total of that?

A. The total expenditures over the eighteen years for this class of expenditure, roadway and structures, was four and three-quarters billion dollars or 51.2 per cent of the grand total for all classes of expenditures. The annual average for roadway and structures expenditures was \$266,000,000.00 for the eighteen-year period and \$403,000,000.00 for the nine years, 1922 to 1930 inclusive.

Q. Have you a series of subsequent exhibits to show what the effect from the benefit standpoint was of these expenditures?

A. Yes, sir.

Q. Was there any benefit to the public as a result of the improvement program which you have described?

Mr. Polley: We object to that as calling for a conclusion.

Mr. Mason: We are about to introduce an exhibit which will exemplify the fact which I have endeavored to elicit [fol. 299] from the witness.

The Court: The objection is overruled.

Mr. Mason: Will you read the question.

(The question was read by the reporter.)

A. Yes, sir.

Mr. Mason:

Q. Have you prepared an exhibit for the purpose of showing what benefit there was to the public?

A. Yes, sir.

Q. Will you state the title, please?

A. The exhibit is entitled, "Average Revenue per Ton Mile and per Passenger Mile, Railways of Class I," and covers the same period of years already referred to, namely, 1922 to 1939 inclusive.

The Court: It may be marked for identification.

The Clerk: Defendant's exhibit No. 16 for identification.

Mr. Mason: Are the sources from which this exhibit was prepared shown on the face of the exhibit?

A. Yes, the footnote at the foot of the exhibit shows that the statistics for each year have been derived from those same statistics of railways to which reference has been

made and the only exception is the year 1939 and in the case of the year 1939 the statistics were derived from a preliminary [fol. 300] publication of the Commission for that year entitled, "Preliminary Abstract."

Q. Does the exhibit correctly reproduce the information appearing in the original sources?

A. Yes.

Q. Has it been checked by you to determine its correctness?

A. Yes, it was carefully checked by members of my staff and then certain of the years as samples were checked by myself personally.

Q. Can you state whether or not it is a true and correct reproduction?

A. In my opinion it is.

Mr. Mason: Have you any questions, Mr. Strouss?

Mr. Strouss: No, I have none.

Mr. Mason: We offer the exhibit.

Mr. Strouss: I am not restating my points in respect to my objection but I take it it may be taken that the same objection is made.

The Court: The record may show the State's objection to this applies and the objection is overruled and the exhibit admitted in evidence.

The document referred to was received in evidence and marked as defendant's exhibit No. 16.

The Court: May I ask if the preliminary report for 1939 is also here in the court room?

[fol. 301] A. Yes, Your Honor. I might say by way of explanation in order to produce its reports more promptly the Commission has for a number of years been in the habit of publishing certain extracts from its later Statistics of Railways in advance of the Statistics of Railways in order that the information should be available at the earliest possible moment. I have in my hand the Preliminary Abstract of Railway Statistics for 1939 published by the Commission and I might say that everyone of these statistics in here will later appear in the formal 1939 publication of the Commission in addition to certain other details which will appear in the Statistics of Railways and which are not contained in this volume but the entries for 1939 which appear in exhibit No. 16 were taken from this Preliminary Abstract.

Mr. Mason: Do I understand that the figures which appear on No. 16 of average revenue are the average actual receipts regardless of expense per ton mile or per passenger mile made?

A. Yes, they are the total revenue received from the handling of the average ton mile or passenger mile, as the case may be.

Q. And no expense has been deducted in order to arrive at a net?

[fol. 302] **A.** No, this is a gross figure but it is an average per unit.

Q. Would it be correct to say, then, that the amount shown here is the amount paid by the public for the transportation service represented by the average ton mile or passenger mile as the case may be?

A. Yes, that is a correct statement.

Q. Will you state then in what manner exhibit No. 16 shows a benefit to the public during the years covered by the exhibit?

A. Taking the first figure column of exhibit No. 16 the average revenue per ton mile and these relate of course to only revenue ton miles, that is, miles performed for the public on a revenue basis, the average revenue per ton mile was 1.177 cents in 1922 and it declined almost steadily over the period to 0.973 cent in 1939. In other words a little less than one cent per ton mile in the latest year. If the 1939 revenue ton miles had been carried at the 1922 average rate the freight revenue of the railways in 1939 would have been greater than they were by \$680,000,000.00. That is a computation derived from the figures in this exhibit. This would have been the increase in the freight bill of the American public in that year alone, 1939, had freight rates [fol. 303] not gone down since 1922.

Q. What as to passenger rates?

A. In the passenger service the decline in average revenue has been even more striking. The average revenue per passenger mile in 1922 was 3.027 cents and showed an almost steady decline to 1.840 cents in 1939. If the passenger miles handled in 1939 had been carried at the average of the 1922 rate the passenger revenue earned by the railways in that year, 1939, would have been greater than it actually was by \$269,000,000.00. That is, this would have been the increased travel bill of the American public in that year, 1939, had the passenger fares not gone down.

Q. Have you made a computation of the combined reduction as to both freight and passenger service?

A. Combining these reductions in freight and passenger revenue because of reduced revenue per ton mile and passenger mile since 1922, the benefit to the public in 1939 aggregated \$949,000,000.00. Similar benefits aggregating hundreds of millions of dollars in each year have accrued during the whole period since 1922. That is, I have worked out the computation for only one of these years but similar [fol. 304] benefits appear from the figures for the intervening years from 1922 to 1938.

Q. Has the benefit to the public been confined purely to the reduction in the transportation cost paid by the shipping and traveling public?

A. No, I have referred in this exhibit only to what may be called the money benefit that the public has experienced during this eighteen-year period. Many additional benefits have also been realized to the public in the form of better and faster transportation service rendered by the railroads as the result of the capital improvement program to which I have referred. To this improvement in service I shall devote some attention at a later point in my presentation.

Q. Have you made a study for the purpose of this case of the benefit accruing to railway employees over the years since 1922, and when I say "benefit to employees" I mean particularly from the standpoint of their average and aggregate earnings?

A. Yes.

Q. You have made such a study?

A. Yes.

Q. Is that set forth in the form of an exhibit or two exhibits?

[fol. 305] A. Yes.

Q. Will you state the title of the first exhibit?

A. The first exhibit referred to is entitled, "Number, Man-Hours and Earnings of Employees, Railways of Class I," and covers the same years already referred to, 1922 to 1939 inclusive.

Mr. Mason: May we have the statement marked No. 17 for identification?

The Clerk: Defendant's exhibit No. 17 for identification.

Mr. Mason: Was the exhibit prepared in the same manner as the exhibits Nos. 15 and 16?

A. Yes, sir.

Q. From the same sources?

A. From the same sources, Statistics of Railways in the United States for the years 1922 to 1938 and for the year 1939 from this same Preliminary Abstract to which reference has been made.

Q. Has the exhibit been compared and checked to determine its correctness?

A. Yes, very carefully compared by members of my staff and spot-checked by myself.

Q. Will you state whether or not it is correct?

A. In my opinion I believe it to be correct.

Mr. Mason: Have you any questions, Mr. Strouss?
[fol. 306] Mr. Strouss: No.

The Witness: The figures are exactly as shown in the Commission's reports except for one or two things that I would like to refer to. Column C which is headed "Man-Hours Paid for" shows the total number of hours for which the employees in the respective years were paid. In its reports, the Commission classifies certain men as working on a daily basis and a much larger number of men as working on an hourly basis. For the daily working employees the Commission reports days worked and for the hourly working employees the Commission reports number of hours worked. For the purpose of this exhibit and in order to place the men and classes throughout on a comparable basis we have reduced the days to an hourly basis by multiplying the days by eight, eight hours per day. To that extent there has been some computation in that column. The final two columns of exhibit No. 17, namely, columns E and F, "Average Earnings per Employee," per hour and per year are computations based on the preceding columns of the exhibit. I might say that this reduction of a day to an hourly basis is common practice among railroad statisticians and others.

[fol. 307] Mr. Mason:

Q. It has been done in the same manner for each of the years so as to preserve the comparison?

A. Yes, for each of the years throughout. The number of men paid on a daily basis is not large relatively in the whole railroad employment.

Q. Generally speaking what classes of employees?

A. Generally speaking they are the classes paid on a monthly basis, for example, the higher officers, supervisory officers, and certain classes among the clerical staff.

Mr. Mason: We offer the exhibit as No. 17.

Mr. Strouss: We make the same objection and I particularly want to call the court's attention to our objection on the basis that it is calling for a conclusion of the witness. It seems clear to me that a big part of the testimony of this witness as opinion testimony, is conclusions and interpretations of records, and for that reason in addition to our other objections it is inadmissible.

The Court: The objection is overruled, it may be admitted in evidence.

The document referred to was received in evidence and marked as defendant's exhibit No. 17.

Mr. Mason:

Q. Any other particular features of No. 17 to which [fol. 308] you wish to direct special attention, Doctor?

A. I would like to say that looking at column E in exhibit No. 17, railway employees of Class I—

Mr. Strouss: Just to be sure, pardon me, Doctor, of course my objections take in all the oral testimony as well as the exhibits, that is understood, Mr. Mason?

Mr. Mason: Yes, that is understood.

The Witness: Railway employees as a whole in 1922 averaged 61.3 cents per hour paid for. That average showed a general and rising tendency during the period covered by the exhibit and was 74.9 cents in 1939. This was an increase of 22.2 per cent or more than one-fifth during the period. Similarly in the last column of the exhibit, column F, which shows the average annual earnings per railway employee, that increased from \$1,623.00 per man per year in 1922 to \$1887.00 per man per year in 1939. This was an increase of 16.3 per cent. The average railway employee not only benefited as to his increase in annual earnings but also as to a reduction in the total number of hours which he worked during the average year. This may be indicated by the statement that the average railway employee in 1939 worked 130 fewer hours than he did in 1922 but he received [fol. 309] \$264.00 more pay for the fewer hours.

Mr. Mason:

Q. Have you made any computation to determine what the aggregate compensation would have been in 1939 if the 1922 hourly rate had applied?

A. If Railway employees of Class I had been paid in 1939 the same hourly compensation which they received in 1922, their aggregate compensation in 1939 would have been less by \$338,000,000.00 than it was. In other words, in spite of the severity of subsidized competition and the depression, the railroads were able to increase the earnings of the employees on their payrolls in 1939 by \$338,000,000.00 above what they would have earned at the 1922 rates of pay. This was accomplished only by reduction in the unit cost of operations.

Q. Have you a statement similar in form to No. 17?

The Court: We will take a ten-minute recess at this time.

Thereupon a short recess was taken after which proceedings were resumed as follows:

J. H. PARMELEE resumed the witness stand for further direct examination as follows:

Mr. Mason: Will you read the last question?

[fol. 310] (The last question was read by the reporter.)

A. Yes, I have an exactly similar statement which deals only with train and engine service and employees, that is, that particular group of the total number.

The Court: That may be marked as defendant's exhibit No. 18 for identification.

Mr. Mason:

Q. Was statement No. 18 prepared in the same manner as No. 17?

A. Yes, and from the same sources with one exception, that the 1939 figures in this particular case are drawn from the primary or preliminary work sheets of the Interstate Commerce Commission which form the final tables and statistics on their Statistics of Railways for that year. That publication is now in the presses, the 1939 Statistics of Railways. One further comment may I make on this, and

that is that column C, Man-Hours Paid for, which I explained in respect to exhibit No. 17 had in it certain computations which reduced the eight-hour day to an hourly basis. That computation was not necessary in respect to exhibit No. 18 because all men working in these classes of employees are paid on an hourly basis so there is no computation work in column C of this table. The last two columns, E and F, are of course computations based upon [fol. 311] the other statistics in the table.

Q. They are computations from the face of the exhibit?

A. From the face of the exhibit, yes, sir.

Q. Has the exhibit been checked and compared as stated by you previously in connection with the others?

A. Yes, in the same way.

Q. Will you state whether or not the exhibit is true and correct?

A. In my opinion it is to the best of my belief?

Mr. Mason: Have you any questions, Mr. Strouss?

Mr. Strouss: No.

Mr. Mason: We offer the exhibit as No. 18.

The Court: Subject to the same objections which are overruled it may be admitted in evidence.

"The document referred to was received in evidence and marked defendant's exhibit No. 18.

Mr. Strouss: I might add on this column C, you are going to bring out more fully what that "man-hours paid for" means?

Mr. Mason: I am going to ask the witness if he will explain in connection with that what is meant by the term, [fol. 312] "man-hours paid for"?

A. May I say first of all that the phrase "train and engine service employees" is the phrase employed by the Interstate Commerce Commission. They classify railway employees into certain general groups and one of those general groups which they identify as Group VI-B is defined by them as transportation train and engine service, that is the Commission's own classification. Man-hours paid for, also following the classification of the Interstate Commerce Commission, is the total number of hours for which payment is made regardless of whether that corresponds to the number of hours worked. In other words,

if a man is paid overtime, we will say at the rate of time and one-half, he is paid for one and one-half hours although he works only one hour. His time for that particular hour in this column would go in as one and one-half hours because that is the time he is paid for although his work was only one hour. That distinction is particularly important with respect to train and engine service employees because they work for the most part on what is known as a mileage basis, they are paid for miles rather than hours, but the mileage basis is translated into hours on the basis of $12\frac{1}{2}$ miles per hour in freight service and generally speaking [fol. 313] 20 miles per hour in passenger service. The thing works out something like this, a man will have a run in freight service of one hundred miles over a day which is looked upon as a day's work or the equivalent of eight hours of work. Now he may actually make his run in five hours or six or seven. He is paid, however, for eight hours or the equivalent of one hundred miles or if he operates 125 miles in a day, which at the rate of $12\frac{1}{2}$ miles an hour is equivalent to ten hours work, he is paid for ten hours although he may actually make his run in considerably less than ten hours, so the man-hours paid for here are the hours for which payment is actually made whether the time is actually put in or not. I shall a little later refer to that fact and point out that if the average compensation per hour which is shown in column E of this table were computed on an hours worked basis the average would be considerably higher than it is shown in this exhibit.

Q. The figures of the average number of employees, are those absolute figures without any conversion?

A. Yes, the figures in column B, C, and D of exhibit No. 18 are taken directly from the Interstate Commerce [fol. 314] Commission's report without any change or computation. As in the case of the total number of employees covered by exhibit No. 17 the hourly compensation or average earnings per hour of employees in this class, train and engine service employees shown on exhibit No. 18, has shown a gradually upward trend during the period from 1922 to 1939. In 1922 the average hourly earnings of this class were 79.1 cents per hour. In 1939 the average had increased to 92.2 cents per hour or an increase of 16.6 per cent during the period. In the same way the average annual earnings per man in 1922 were \$2,226.00 and that

average had increased by 1939 to \$2,526.00 per year or an average of something more than two hundred dollars per month averaged over the whole of this class of employees. Reverting to the matter of the hourly earnings on which I commented a moment ago and using as my illustration only the year 1939, the average hourly earnings per employee that year on the basis of man-hours paid for were 92.2 cents. Were that same average re-computed on the basis of hours actually worked for this class of employees the average would be increased to \$1.12 cents per hour. In other words, that class of employees in 1939 for the hours that they actually put in in service earned \$1.12 per hour. [fol. 315] Q. Will you state whether or not yard employees are included in the classification of train and engine service employees?

A. Yes, they are, this includes engineers, firemen, brakemen, conductors and baggagemen in road service and also the same groups of men in the yard service.

Q. Have you made any comparison between the reduction as it appears in these exhibits in the average number of train and engine service employees as between 1922 and 1939 and the average number of all employees as between 1922 and 1939?

A. I haven't the figures in exact form.

Q. That is a computation that can be made from the face of the exhibit?

A. Yes.

Q. To show whether there has been a greater or less decline in one class as compared to the entire group?

A. I was just going to say that the reduction in number of train and engine service employees as shown on exhibit No. 18 as between 1922 and 1939 was considerably less relatively than the reduction in the number of all employees as shown on exhibit No. 17. I will be glad to work those figures out in exact percentages and have them later.

[fol. 316] Q. At the same time will you undertake to work out the relative decline in the total compensation earned by the train and engine service group and the total compensation earned by the entire group?

A. Yes, I will be glad to do so.

Q. Doctor, was the year 1939 a year of relative prosperity or otherwise for the railroad industry as a whole?

A. I would say that it was a year of comparative

pression. In other words, not quite so bad as some of the years in the very depths of the depression like 1932, 1933, and 1934 but still of a considerably depressed character.

Q. So far as the railroad industry is concerned how long has the depression continued?

A. I would say that the depression has continued certainly from the beginning of 1931 and is still continuing.

Q. Have you some figures as to revenues and earnings to bear out the statement that you have just made?

A. Yes, I have prepared an exhibit which is entitled, "Income Account, Railways of Class I in the United States, Calendar Years 1929 to 1939."

[fol. 317] Mr. Mason: May this be marked as No. 19?

The Court: It may be marked.

The document was marked as defendant's exhibit No. 19 for identification.

Mr. Mason: The sources from which this exhibit was prepared are shown on its face, are they?

A. Yes, the sources are indicated in the foot-note at the foot of the exhibit and they are for the first nine years, 1929 to 1938, the Statistics of Railways which reference has been made and for the year 1939 the Preliminary Abstract of those statistics which has also been described and the figures in the exhibit with one exception are taken directly from the respective report of the Commission.

Q. What is that exception?

A. The exception I refer to is item 10 in exhibit No. 19, "Return on property investment—per cent," which is a computed figure. It is computed, however, on the basis of a property investment figure which appears in the Commission's report.

Q. That is, it is taken by applying the figure in line 9?

A. Yes, the rate of return as shown in item 10 is the percentage ratio of the net railway operating income shown [fol. 318] in line 9 to the property investment, the property investment being the investment of the railroad in road and equipment plus materials, supplies, and cash. That is the Commission's own classification. Perhaps I should add that item 16 shown as "Other deductions" and item 11 shown as "Other income" in each case is a combination of several smaller items which I have made as a

mere matter of convenience, so that those items are subject to some slight explanation. However, the items which go to make up those entries in this exhibit are all taken from the Commission and are merely added together so as to condense this statement to some extent.

Q. You haven't undertaken to deal with those figures other than to sum them up for the purpose of making a single item out of three or four?

A. That is right, I can give the component items if desired but simply as a matter of convenience and not to have this too detailed a statement they have been summarized here for condensed purposes.

Q. Have you checked the exhibit against the original sources?

A. Yes, I have made a very careful check of all the figures in this statement myself and it has been very thoroughly checked by members of my staff, checked and double-checked.

Q. Would you say whether or not it is true and correct?

A. I believe it to be so, yes, sir.

Mr. Mason: Have you any questions, Mr. Strauss?

Mr. Strauss: No.

Mr. Mason: We offer the exhibit as No. 19.

Mr. Strauss: Same objection.

The Court: The record may show the same objection and it is overruled and the document admitted in evidence.

The document referred to was received in evidence and marked defendant's exhibit No. 19.

Mr. Mason:

Q. There are one or two figures on the exhibit I would like to have explained a little further, Doctor. Does the figure "Net railway operating income" mean that that is the amount of money available after bond interest and all other fixed charges have been paid or is there some deductions on that?

A. No, that is the net which is available to the railways before interest and other fixed charges. That is the sum of money out of which the interest and other fixed charges must be derived and must be paid.

[fol. 320] Q. These items, 13, 14, 15, and 16, do they represent the fixed charges and other deductions?

A. Yes.

Q. In what line of the exhibit will be found the figures indicating the money available for the payment of dividends upon common and preferred stock?

A. The dividend payments if any would have to come out of net income which appears in line 18 or the last line on the exhibit.

Q. I think you said that the last ten years have been in your view years of relative depression. Can you illustrate that from the exhibit—or the depression for the railroad industry?

A. Yes, I can call attention to two or three features which I think bring that point out and support my statement. Take first the total operating revenues, item No. 1 or line No. 1 in the exhibit, that represents the gross money available to the railways from all transportation sources from which of course all the expenses, taxes, and other obligations must be met. In the year 1929 that gross or total exceeded six billion dollars, \$6,279,500,000 according to the entry in the exhibit. I might say that during the ten years ending with 1929 the operating revenues of [fol. 321] railways of Class I exceeded six billion dollars in seven of those ten years and they were not below five and one-half billion dollars in any of the remaining three of the ten years.

Q. The figures which you are now reciting as to the ten-year period ending with 1929 are taken from your own inspection of the Commission's statistical reports, are they not?

A. Yes, that is correct.

Q. They do not appear on the exhibit?

A. They do not appear except for the year 1929 on this exhibit. I was simply using that as a background against which to present this exhibit. Summarizing in the preceding ten-year period seven years showed a total of more than six billion dollars and the remaining three years exceeded five and one-half billion dollars. From 1930 to 1939, however, all of which years do appear in this exhibit there was only one year that exceeded five billion dollars, that is the year 1930 when we were still on the downward trend. In only three additional years did the revenues

exceed four billion dollars and in the remaining six years the total revenues were less than four billion dollars. In 1939 they were three billion, nine hundred ninety-five [fol. 322] million dollars. So much for the gross. The net railway operating income, item 9, is the sum available to the railroads after the payment out of revenues of the operating expenses, which include of course payments to employees, the taxes to the various Federal, state, and local governments and certain so-called "operating rentals" for the use of equipment and things of that sort. It is the net railway operating income on the basis of which the Commission compute a rate of return on either investment or value, the "fair rate of return" so-called. Now the net railway operating income in 1929 equalled approximately one and one-quarter billion dollars. It dropped in 1930 to less than nine hundred million dollars and the largest amount that has been earned since that year was in the year 1936 when it was \$667,000,000. In 1939 it was approximately \$589,000,000. More important perhaps than the gross figures of net railway operating income is the rate of return which that net represents as a basis of a rate of return in percentage terms on the property investment. The highest figure of rate of return during this period covered by the exhibit was 4.81 per cent in 1929. It dropped very quickly and very rapidly to 1.24 per cent in 1932, that is line 10 on the exhibit. In other words, in [fol. 323] 1932 the railways earned less than one and one-quarter per cent on their investments and out of that had to pay their interest and other fixed charges. There has been some improvement since 1932 but in 1939 it had risen only to $2\frac{1}{4}$ per cent on investments. The only other item I would call attention to is the final one, line 18, net income after fixed charges, as it is sometimes called. That is the net income which is available, if there is any available, for the payment of dividends, for financing improvements, capital improvements, and so forth, and for additions, reserves, and surplus. In 1929 the railroad had \$896,000,000.00 of net income, that is the railroads of Class I as a whole, including those which earned and those which did not earn in that year any net income. In 1930 that dropped to approximately \$524,000,000.00. It dropped off in 1931 to \$135,000,000.00 and then for three years, 1932, 1933, and 1934, there were actual deficits in the in-

come. In other words, the railroads in each of those years failed to earn enough to meet and pay their fixed charges. There was a very small net income in 1935 of seven and one-half million dollars. In 1936, \$165,000,000.00 of net income which was reduced in 1937 to less than one hundred [fol. 324] million dollars and there was a renewed net deficit in 1938 of \$123,000,000.00. The net income last year, in 1939, was \$93,000,000.00.

[fol. 325] Q. What factors are responsible for this situation that you describe?

A: Two primary factors are responsible for this situation, as outlined in Exhibit No. 19, namely, the economic depression and subsidized competition. That the railroads have weathered this storm as well as they did, was due almost entirely to the foresight of management in negotiating and carrying out the capital improvement program, which, as I will shortly show, resulted in a substantial reduction in the unit cost of railroad operation.

Q. Are there any demands for improving or continuing to improve transportation service now which face the industry from any standpoint?

A. Yes, the industry is faced with meeting certain demands which are now accruing and will accrue in the future from the national defense program. Railroads are meeting these demands adequately, efficiently and economically, because the railroad is designed for mass transportation. It is essential to the national welfare that it be maintained on such a mass transportation basis and be kept free from potential bottlenecks.

Q. Have you any statement, Doctor, relating to the total of the unit cost of transportation service for the railways [fol. 326] of the United States, Class I?

A: Yes, I have.

Q. Will you state its title, please?

A. This exhibit carries the title "Railways of Class I in the United States, Freight Operating and Freight Transportation Expenses, Calendar years 1920 to 1939, inclusive." I would like to call attention to the fact that although the actual title says: "Calendar years 1920 to 1939" that is a mistake and should be "Calendar years 1922 to 1939, inclusive."

Mr. Mason: May we have this statement marked as Defendants Exhibit No. 20 for identification.

The Clerk: Defendant's Exhibit No. 20, marked for identification.

Mr. Mason: I will also ask that the Court permit the record copy, and that counsel also correct their copies, so as to show "1922" in the place of "1920", if there is no objection.

The Court: The record may show the change.

Mr. Mason:

Q. Exhibit No. 20, marked for identification shows on its face, does it not, the source from which it was prepared?

A. Yes, the sources are indicated in the foot note, and [fol. 327] that applies to the first three figure columns, b, c and d, although it is stated in the foot note that the data for 1939 were compiled by and on file in Bureau of Statistics, Interstate Commerce Commission. I would like to say that the preliminary abstract for that year, to which I have already referred, has become available, and the figures for 1939 were checked back, with the preliminary abstract, so that they do really come from the preliminary abstract, and are on all fours with the previous statements. The last figure columns e and f are computations based on the previous columns and the totals at the foot of the exhibit total, 1936 to 1939, and 1922 to 1925, are, of course, summarized figures which are drawn right from the earlier entries in the exhibit. Also the percentage of the improvement, which is shown in the foot of the statement.

Q. The figures of the columns e and f simply show summarized computations from the preceding columns?

A. Yes. I would like to also comment on the words "per cent of improvement". The word "improvement" is used in the sense of a reduction in costs. That is, the per cent of improvement is a reduction in costs.

[fol. 328] Q. Has the exhibit been checked?

A. Yes, in the same way as the other exhibit.

Q. Will you say whether or not it is true and correct?

A. I believe it to be so.

Mr. Mason: Have you some questions, Mr. Strouss?

Mr. Strouss:

Q. The freight operating expense, covering overhead expense, includes transportation?

A. Include all overhead, transportation and maintenance,

and the figures as they stand are reported by the railways in accordance with the regulations and classifications.

Mr. Strouss: We make our same objection.

The Court: The objection overruled and it may be admitted.

The Clerk: Defendant's Exhibit 20 admitted in evidence.

Mr. Mason:

Q. Do you wish to call attention to particular figures shown in the exhibit, Dr.?

A. Very briefly, the total cost of rendering the freight service, that cost being computed in line with the classification laid down by the Interstate Commerce Commission, was in the year 1922 \$9.50 per 1,000 revenue ton-miles. [fol. 329] That is the entry against the year 1922; in the next to the last column of the exhibit, \$9.50 per 1,000 revenue ton-miles in 1922. And that average was reduced almost yearly throughout the period until it left in 1939 an average of \$6.43 per 1,000 revenue ton-miles. In the two years, 1922 and 1939 it will be observed that the total revenue ton miles were very close to each other, 339 billion ton miles in 1922 and 333 billion ton miles in 1939. For that reason the two years are quite closely comparable with each other, with respect to the value and the volume of freight traffic, which makes the reduction in the cost of operating freight per thousand ton-miles as between those two years even more striking than ordinary. The reduction from 1922 to 1939 from \$9.50 per thousand ton-miles to \$6.43 per thousand ton-miles was a reduction of 32.3% or almost one-third. For the four years at the beginning of that 18 year period, 1922 to 1925, and the four years which stand at the end of the period, 1936 to 1939, the averages are shown at the foot of the exhibit. The average for the first four-year period was \$8.71 per thousand ton-miles, and had declined in the last four years to \$6.49. A reduction or improvement of 25.5% or approximately one-fourth. [fol. 330]

Q. Doctor, is the comparison of the four-year periods at the beginning and end of the period steady in your opinion, or more or less flexible?

A. For the purpose of demonstrating a trend it is hard to give a general answer, because there are cases where single comparisons are better and some where a period

comparison is better. I have shown in this exhibit the basis of an annual and also divided into four-year periods at the beginning and end. The trend can be measured in several different ways. I think for the purposes of this particular showing, and because the years 1922 and 1939 were as I have indicated, comparable in other respects, I think a comparison of the reduction between 1922 and 1939 is somewhat more significant than the four-year comparison, but they both, in my opinion, carry considerable significance.

Q. Do you find from the exhibit similar trends in the transportation expense group?

A. Yes, the freight transportation expense, which is shown in column d are, of course, those expenses which are related only and are restricted to the handling of the trains on the road, and the transportation expenses [fol. 331] are those that are Classified by the Interstate Commerce Commission as the expense of conducting transportation.

Q. You said that they included all the road expense. Do they include also the costs and expenses in yards associated with the making and breaking up of trains?

A. Yes. I meant to use those words. The general figures which appear in column (d) have been reduced to an average of per thousand revenue ton-miles, and those averages appearing in column (f), briefly, shows a reduction between 1922 and 1939 from \$4.62 in 1922 to \$3.14 in 1939. This was a reduction, or improvement as it is shown on the sheet, of 32 per cent, or almost one-third. Now, a four-year average is also shown in the foot of the exhibit. The reduction based on that form of comparison was from \$4.16 per thousand ton-miles in the first four years of the period to \$3.18 in the last four years of the period, or a reduction of 23.6 per cent.

Q. Doctor, you have spoken in connection with some of your earlier exhibits of the benefits flowing to the public, that is to say, the patrons of the railroads, to employees of the railroads of Class I, following the adoption of, in 1923, a program of betterment, will you say whether or not [fol. 332] the benefits flowed to the railways themselves following the adoption of that program, and if so, how it is illustrated by your exhibits?

A. You are speaking of Exhibit No. 20.

Q. Yes?

A. The fact that the railroads were able, because of this improvement program, to reduce their operating expense per unit of traffic, meant of course that they were able to handle the same traffic in 1939 as 1922, with a reduction of One Billion One Hundred Million Dollars, and with a reduction of transportation expense of more than Five Hundred Million Dollars, the benefit, therefore, was largely made up of reduction of expenses, and all the money benefits from such reduction went or flowed to the public.

Q. Were there other benefits by way of increased speed, which are to be later demonstrated?

A. Yes. I am referring to only money benefits.

Q. Have you an exhibit similar to exhibit number 20, but relating to passenger service?

A. Yes.

Q. Will you state the title of the exhibit now before you, Doctor?

[fol. 333] A. This exhibit No. 21 is a companion to the previous exhibit No. 20, except that this deals with the passenger service, whereas the other dealt with the freight service.

Mr. Mason: May we have this statement entitled "Passenger Operating and Passenger Transportation Expenses, Railways of Class I" marked for identification as Defendant's Exhibit No. 21?

The Court: It may be marked.

The Clerk: Defendant's Exhibit 21 marked for identification.

Mr. Mason:

Q. Was Exhibit No. 21 prepared in the same manner as Exhibit 20?

A. Yes.

Q. Given a similar check as to its accuracy?

A. Yes.

Q. And will you say whether or not it is true and correct?

A. I believe it to be correct.

Q. I take it that it embodies certain computations which you have made or supervised?

A. Yes, they are similar with respect to Exhibit No. 20.

Q. And the unit of expense, which is the unit as to which the expense is computed, instead of being revenue ton miles is the car miles of passenger trains?

[fol. 334] A. Yes. The so-called passenger train car mile, which is the usual unit selected and used for that purpose in passenger service.

Q. Have you certain comparisons on the face of the exhibit to which you wish to call attention? Just a moment. I now offer Exhibit No. 21 marked for identification, in evidence?

Mr. Strouss: Same objection.

The Court: Objection overruled, it may be admitted.

The Clerk: Defendant's Exhibit No. 21, admitted in evidence.

Mr. Mason:

Q. Will you proceed?

A. In respect of this exhibit No. 21, as to that of Exhibit 20, there has been a considerable decline, a considerable reduction in the average cost of operating the unit of service in the passenger service, which in this case is the passenger train car mile. It will be noted that in 1922 that the total passenger operating expense—averaged per car mile in that year 34.19¢, and had been reduced by 1939 to 25.69¢. That reduction was 24.9%, or approximately one-fourth. Taking the first four years, or the period 1922 to 1925, and the last four years, or the period 1936 to 1939, the reduction was [fol. 335] from 32.8¢ per car mile in the first four-year period to 25.67¢ per car mile in the last four year period. This was a reduction, or improvement as it is shown on the exhibit, of 21.74%. Those figures deal with the total operating expense. Column (d) shows passenger transportation expenses, and are the expenses of handling the trains and the cars over the road, including the yard service. The average cost of transportation alone per car mile was 16.57¢ in 1922, and had been reduced to 12.26¢ per car mile in 1939. This was a decline of 26%. On the four-year basis the decline was from 15.40¢ during the first four years of the period to 12.31¢ during the last four years of the period. This was a decline of 20.06%.

Q. Have you made any computations from exhibits 20 and 21 to determine what the increase in the total expense of freight operations would have been if the 1922 unit cost had prevailed in 1939 and similarly as to the total passenger operating cost?

A. Yes.

Q. Will you state the result of this computation?

A. Had the railways of class I operated in 1939 at the 1922 cost per unit, the total freight operating expenses [fol. 336] in 1939 would have been greater than they actually were by One Billion Twenty Four Million Dollars, and the total passenger operating expenses would have been greater than they were by Two Hundred Fifty-three Million Dollars. The two items combined would have represented a total increase in operating expense in 1939 over what they actually were, amounting to One Billion Two Hundred Seventy-seven Million Dollars.

Q. Does this amount of money, One Billion Two Hundred Seventy-seven Million Dollars, represent a saving of operating cost to the railroads?

A. A saving in this sense, that if they had operated the same business in 1939 with the 1922 cost and expense, it would have been greater by that amount of more than One and one-quarter billion dollars?

Q. Did the railroads themselves receive the benefit, or to whose benefit did it flow?

A. Every dollar of this savings of expenses and more besides was passed on either to the public in the form of reduction of freight rates or passenger fares; or to railroad employees in the form of increased compensation per hour, or the various federal, state or local governments in the form of increased taxes.

[fol. 337] Q. Can you point to any figure on Exhibit 19 which may illustrate what you have just said.

A. It would be a little difficult to pick those figures out from Exhibit 19. The statements which I have made are statements which I have derived from certain exhibits, particularly as to the savings to the public. Exhibit No. 16, dealing with average revenues per ton mile, or passenger mile, and exhibit No. 17 shows the number of man-hours and earnings of employees; and as to increased taxes, exhibit No. 19 shows that during the past few years there has been a considerable increase in the total amount of taxes paid by the railroads, and that amount represents a much greater relative burden on the revenues of the railroads, because as the taxes have increased, the actual revenues from which the taxes are paid have been declining.

The Court: We will take our noon recess at this time until 2: p. m.

[fol. 338] Tuesday, November 26, 1940. 2:00 P. M.

All parties being present as heretofore noted, proceedings were resumed as follows:

The Court: You may proceed with the examination of the witness.

J. H. PARMELEE, a witness called on behalf of the defendant, resumes the stand and testifies further as follows:

Direct examination.

Continued by Mr. Mason:

Q. Dr. Parmelee, at the conclusion of the morning session you had given for the record, the figures showing what the expenses would have been if 1922 unit costs had been applied to 1939 total traffic units, and indicated, I think that the increase in operating costs computed on that basis would have been \$1,277,000,000, and had then stated as I recall, that this reduction—that considering this as a reduction or saving in expense, it had been passed on either to the public in reduced fares or to employees in increased rates of pay, or to the Government in the form of taxes. Have you made some computation to show just how this has come about?

[fol. 339] A. Yes, it is based on Exhibit 16, which went into the record this morning, showing the average revenue per ton mile and passenger mile. It appears that the saving to the public in 1939 from lowered freight and passenger rates in that year was \$949,000,000. Based on Exhibit 17, which dealt with the average earnings per hour of the railway employees, it appears that in 1939, compared with 1922, because of increased hourly earnings the employees received in that year \$338,000,000 more than they would have received had the 1922 average rate of pay prevailed.

Q. That is, as to this last computation, you apply the 1922 average rate of pay to the man hours paid for in 1939?

A. Yes, and as to taxes paid by the railways there was an increase in their tax bill between 1922 and 1939 of approximately \$54,000,000. Adding together, then, the \$949,000,000 savings from lowered rates to \$338,000,000 more paid off to employees because of higher hourly compensation and the increase of \$54,000,000 in railway taxes, the sum of those

three figures is \$1,341,000,000, which is considerably higher than the \$1,277,000,000 which I computed as having been derived by the railways from lowered unit costs of operation.

[fol. 340] Q. Dr. Parmlee, have you made a computation from the figures on Exhibits 17 and 18 to determine, first, the relative reduction in the average pay of all employees as between 1922 and 1939, and the relative reduction in the total compensation paid to all employees, and then the relative reduction in percentage between the average pay of train and engine service employees in 1922 and 1939, and in their total compensation in those two years, and finally the relative reduction in percentage of all employees other than train and engine service employees, and their total compensation for the two years?

A. Yes.

Q. Will you recite those computations, and I take it these computations are made from the figures appearing on the face of Exhibits 17 and 18?

A. Yes, they are computations based on the entries in those Exhibits 17 and 18 for the years 1922 to 1939. Taking first the number of employees as between the two years and taking first all employees, there was a reduction of 39.3%. For train and engine service employees, however, the reduction was less. It was 29.4%.

The Court: You mean, Dr. Parmelee, of the employees [fol. 341] that were actually employed during that period?

A. There was that percentage of reduction in the number of employees on the payrolls in 1939 compared with 1922. And taking all employees, other than the train and engine service, the reduction was 41.5%.

A. There was that percentage of reduction in the number of employees on the payrolls in 1939 compared with 1922. And taking all employees, other than the trains and engine service, the reduction was 41.5%.

Turning next to the reduction in the total payrolls, the aggregate compensation paid to these several classes, the reduction between the 1922 and 1939 payrolls of all classes of employees was 29.4%. For train and engine service employees it was 19.9%, and for all classes other than train and engine service employees it was 32.6%. In other words, during that period, other employees than the train and engine service groups suffered more severely from the depression and from other causes than did the train and

engine service employees. The latter less as to the number of employees laid off, and they suffered relatively less as to their total compensation.

Mr. Booth: Pardon me, as to the total compensation, you mean the total amount paid these employees, paid by the Company for their service?

A. Yes.

Q. You don't mean to indicate that their average compensation was decreased?

[fol. 342] A. No, by total compensation I mean the total or aggregate sum of money paid to the employees as a group, which has nothing to do, of course, with the average hourly rate of pay.

Mr. Mason:

Q. Or the individual earnings?

A. Or the individual earnings per man.

Q. Have you prepared a statement entitled, "Freight Service Operating Averages, Calendar years '22" and so on to 1939?

A. Yes.

Q. Consisting of one sheet.

Mr. Mason: May we have the statement marked.

The Clerk: Defendant's Exhibit 22 for identification.

Mr. Mason: Is this exhibit prepared from the sources shown on the sheet, itself, Doctor.

A. Yes, the sources are described and indicated in the foot-note at the foot of the exhibit. They are in part the statistics of railways, of the Commission to which reference has been made, and in part the Commission's monthly summary of freight train performance and of fuel and power for locomotives and rail motor cars, those summaries being in each case for railways of Class I as a whole.

Q. Now, the notation also says that certain figures for 1939 were compiled by and are on file in the Bureau of [fol. 343] Statistics. Do those figures also appear in the preliminary abstract?

A. Yes, they do. The preliminary abstract has become available to me since this was prepared, and these figures have been checked back against the preliminary abstract and they are correct.

Q. Are all the documents or reports shown as sources,

actual publications by the Interstate Commerce Commission?

A. Yes.

Q. And available to the public at large?

A. Yes, they are matters of public record.

Q. And are similar where they are not the same, similar to the statistics of railways in the United States, the publication to which you referred this morning as an annual publication?

A. Yes.

Q. Has the exhibit been checked against these underlying sources to determine its correctness?

A. Yes sir, it has been very thoroughly checked in my office. I have personally checked almost every figure of the exhibit.

Q. I take it the figures shown in the exhibit, with the exception of those shown in column M are the figures which appear in the various sources and documents, are they?

[fol. 344] A. Yes, except in one or two cases it was necessary to add one or two items together in the Commission's report to get a total.

Q. Will you refer to those sources?

A. All right. In line 3, Item 3, "Freight cars per freight train," down to and including the year 1935, the Interstate Commerce Commission in its own monthly summaries include caboose-miles in its averages. Beginning with the year 1936 the Commission has not included caboose-miles in its basic figures. For this particular exhibit, in order to put the figures throughout this whole period on a comparable basis and inasmuch as up to the year 1935 the Commission did include caboose-miles, I added for the years 1936, 1938 and 1939 in this exhibit—I have added the caboose-miles in, and reworked a new average so that the figures are comparable throughout the period, and those earlier years from 1934 back are taken direct from the Commission's reports. The last three entries against that particular item are my own computations, but worked out on exactly the same basis as the Commission used in previous years.

Q. Would the computation for the last three years shown, by adding in the caboose-miles, result in a greater average [fol. 345] number of cars per train than would otherwise appear?

A. Yes, it would be a fraction of one more car on the average.

Q. I take it, then, that these averages shown in line 3 are in effect the average length of freight trains inclusive of caboose?

A. That is correct.

Q. Will you state whether or not the exhibit is true and correct as a reproduction of the underlying sources?

[fol. 346] A. It is, to the best of my belief.

Q. Were you present in the court room when Mr. Porter testified, Doctor?

A. Yes.

Q. Did you have an opportunity to examine Exhibit Number 12 introduced by Mr. Porter?

A. I haven't had a copy in my hands, no.

Q. I will show you one, Mr. Porter's number 12, and ask you to look at it for a moment.

A. The entries in Exhibit 22 correspond exactly to the entries in Exhibit No. 12. That is, by "correspondent" I mean they are the same entries described in the same language and for the same years.

The Court: But Number 12 takes care of the New York Central system only, whereas, this is all class-1 railroads?

A. Yes, that is correct, your Honor, it is; although, the same form had been used, of course, filled in for that single railroad and figures filled in in Exhibit 22 for all railroads of class-1 as a group.

Mr. Booth:

Q. As a matter of fact, we furnished you with that form, did we not?

A. Yes.

Mr. Mason: Have you any questions at this time, Mr. Strouss?

[fol. 347] Mr. Strouss:

Q. This exhibit was prepared by you for the purpose of this trial?

A. Yes, sir.

Q. The sources of this information other than the Statistics of Railways in the United States are not available here in court, are they?

A. Yes, they are here.

Q. Other than these other statistics, other than the railway statistics?

A. Yes.

Mr. Strauss: Will you let us have those for use, too? I don't mean right now, but I would like to have them this evening.

The Court:

Q. You refer, Mr. Strauss, to Interstate Commerce Commission Summary of Freight Train Performance, Class 1?

Mr. Strauss: Class 1; I don't want them right now.

Mr. Mason: What Mr. Strauss desires, are these M-211 and M-230 statements shown in the first paragraph under "Source".

Mr. Strauss: That is right.

A. Yes, I have the complete files in my hands from which these statistics were drawn, and I will be glad to hand them to you after the hearing.

Mr. Strauss: That is the only question we have.
[fol. 348] The Clerk: Defendant's Exhibit 22 in evidence.

Mr. Mason:

Q. Are there any indexes or other figures on this exhibit, Doctor Parmelee, which indicate relative efficiency of freight train operation for the railroads of the United States?

A. I would say that all of the entries from "3" down to "10," inclusive, are indexes of operating efficiency of one type or another. The first two items, "1" and "2", are, of course, basic figures showing the mileage operated in freight service and the total number of freight train-miles. The remaining eight items in the exhibit are indexes of operating efficiency.

Q. Is there any particularly pertinent comparison of years upon the exhibit to which you wish to draw attention?

A. As I stated earlier with respect to another exhibit, I believe the years 1922 and 1939 are very excellent years for comparison one with the other so far as freight operating statistics are concerned, chiefly because the volume of freight traffic in those two years was almost exactly the same. There was a very slight difference between the two years.

Q. The volume that is actually shown on the preceding [fol. 349] exhibit?

A. Yes. For that reason any variations that might be due to differences in volume of traffic disappear from such a comparison and the comparison can be quite directly made, one with the other.

Q. Did you wish to draw any particular attention to Item 1 of the exhibit.

A. Item 1 on Exhibit 22 shows the miles of line operated in freight service for each of the years covered by the exhibit. That item, miles of line, reached its peak in the year 1932, at 240,208 miles, but because of the severity of subsidized competition has been declining gradually during the subsequent period, reaching a total of 232,026 miles at the end of 1939, as shown on the exhibit.

Q. Turning to Item 2, "Freight train-miles", will you please call attention to such significant comparisons there.

A. Freight train-miles declined from five hundred and fifty-five million, in round figures, in 1922, to four hundred and fifty-two million in 1939. That is a decline of 18.6 per cent; and I call particular attention to that decline in the light of the fact that, as I have already stated, the actual ton-miles in 1939 were about the same as they were in 1922. [fol. 350] In other words, approximately the same number of ton-miles was handled with eighteen per cent fewer train-miles.

Q. Does that mean that each train-mile was productive of more actual transportation service?

A. Yes, on the average.

Q. And what factor or factors contributed to this greater productivity per train-mile?

A. One of the most important factors in that connection is indicated by Item 3 on Exhibit Number 22, more cars per freight train. That factor contributes to an increased output per train-mile and shows an increase from 38.4 cars per train in 1922 to 49.1 cars per train in 1939—an increase of 27.9 percent over the period.

Q. Does the figure of "Freight cars per freight train, which, of course, here is an average, as the title indicates—does that increase the average length of the typical freight train?

A. No, not at all.

Q. Just how is the figure arrived at and what does it indicate as to freight train performance?

A. The average of freight cars per train should not be used as to the number of cars in a typical freight train. It is a mere composite average made up of the varying numbers of cars in a great many different kinds of trains. Railroads, of course, perform a number of different kinds of freight service. One type of service is the through service, usually involving a relatively long haul, which moves products of one section of the country, the producing area, to other sections, the consumer areas. The movement of perishable fruits and vegetables from the west coast to midwestern and eastern points is another special example of this type of service. Speed, dependability, efficiency and low cost transportation are vital to movements of this kind, and the use of longer trains is particularly suitable and desirable for this type of service. Another type of service is the movement of heavy commodities such as coal, which also move a relatively long distance, and are most efficiently and economically handled in longer train units. Still another type of service is that known as local and way service, the many smaller communities on main lines between train terminals on the branch and division lines require service of this kind. While most trains in this type of service are short trains, they do sometimes exceed seventy cars. Other things equal the length of freight trains depend upon the quantity of traffic available [fol. 352] for movement. Generally speaking, traffic is moved most efficiently and most economically in longer train units. However, service requirements will not permit the holding of cars at concentration points in order to build up a longer train, and in such cases short trains are run. This phase of the matter will be gone into in some detail by witnesses who will follow me on the stand. The point I wish to make clear here is that item you see on this exhibit 22 is the average length of all trains, some long some short, some exceeding seventy cars and some with less than seventy.

Q. Now will you address yourself to Item 4, which is "Net tons per freight train", and call attention to any other significant matters that appear in connection therewith.

A. "Net tons per freight train" is sometimes referred to as the average train load, the number of tons of freight, both revenue and non-revenue, that are in the average freight train. This average increased from 676 tons in

1922 to 813 tons in 1939. This was an increase of 137 tons per train or 20.3 percent. In other words, five trains in 1939 handled as much revenue tonnage as six trains did in 1922, which was the result of handling more cars per train and of increasing the capacity of the average freight car.

[fol. 353] Q. As to Items 5 and 6, will you explain what they indicate?

A. Items 5 and 6 deal with the tractive power of the locomotive and the average capacity of the average freight carrying car. As a result of the installation of new and larger locomotives and the retirement of smaller and obsolete units the average tractive power of steam locomotives in service increased from 37,441 pounds per locomotive in 1922 to 50,395 pounds in 1939, an increase of 34.6 percent, or more than one-third. In the same way the average capacity of the average freight car has increased from 43.1 tons in 1922 to 49.7 tons or just short of 50 tons, in 1939, an increase over the period of 15.3 percent.

Q. What is the significance, Doctor, of the item Number 7, "freight train speed"?

A. Item 7 deals with the average speed made by the average freight train between terminals in terms of miles per hour. The new and powerful locomotives which have been installed not only handled more cars and more net tons per train, but also made better time between terminals while doing so. Item 7 shows the average freight train speed increased from 11.1 miles per hour in 1922 to 16.7 miles per hour in 1939, an increase of 50.5 percent, or more than [fol. 354] one half.

One factor in this increased average speed was a considerable reduction in road delay, through traffic congestion, train accidents, etc.

Q. You will find in the next items, 8 and 9, a combination of speed and loading, which enables you to arrive at performance indexes?

A. Yes.

The Court: Pardon me just a moment there, Doctor Parmelee, I believe the testimony from one of the witnesses who heretofore testified, referring to Number 7, the freight train speed, was that those figures represent elapsed time rather than actual running time between destinations.

A. Yes, that is what I tried to show. It was the actual time between terminals including all road delays divided into the total number of miles covered.

Mr. Mason: And I understand, Doctor, from what was said previously that in computing freight train speed the time in terminals is not taken into account?

A. No, simply the time when the train is checked out of one terminal and the time it is checked into the destination terminal.

Mr. Strouss: Again I want to say I am not making my [fol. 355] objections here upon the understanding that the objections heretofore made go to all this testimony.

• Mr. Mason: The general objection of relevancy and competency.

The Court: Yes.

Mr. Strouss: I repeat that because there might be some question. Because when an exhibit is introduced specific objections are made then, I don't want that to be taken that I am not urging my objection to all the testimony as well as the exhibits.

Mr. Mason: I think we understand, your Honor, that the objection to the introduction of the exhibit likewise goes to the discussion of the exhibit by the witness, without its being repeated.

The Court: Yes, the court will so construe it.

Mr. Mason: Q. Will you proceed now to Items 8 and 9?

A. Mr. Wright quite fully described the items of the gross ton-miles per freight train-hour and indicated what in his opinion was its significance and its importance in railroad operating statistics. I do not need to repeat what he said and will simply say I agree with him fully as to the significance and importance of that particular operating index.

[fol. 356] The item, gross ton-miles per freight train-hour found on Exhibit 22 more than doubled between 1922 and 1939, showing an increase of 102.7 percent. That is purely an index of railroad operating efficiency. The next item, net ton-miles per freight train-hour, is an index of efficiency of handling the freight, loading and getting the freight itself over the line, because it is restricted to the freight in the train and does not include the weight of the train which is included in Item 8. Now net ten-miles per

freight train-hour have also shown a very marked increase over this period, the increase being 79.8 percent, or nearly 80 percent over the seventeen-year period.

Q. Will you say in connection with Number 9 whether or not the action of shippers in loading freight cars to capacity or less than capacity, or barely to minimum, has any effect upon the carrier's ability to realize a high figure of net ton-miles per freight train-hour?

A. Yes, it does have an effect. The more fully the shipper loads his car and the more cars on the train, of course, the more tons of freight can be hauled within a given period of time.

Q. Are the carriers able to control completely or to a substantial extent the policy of shippers, or individual [fol. 357] shippers, in loading to capacity or barely to capacity?

A. Directly, they can't control it at all. Indirectly, of course, there are inducements offered shippers to load more heavily in the way of minimum carload rates and things of that sort. But in the last analysis it is for the shipper to decide how much he will load in his freight car.

Q. Have you any comments in connection with that Item Number 10?

A. Item Number 10 shows the total number of gross ton-miles handled by the railways for each ton of fuel consumed by locomotives, and the word "fuel" in that connection means all kinds of fuel, coal and fuel oil, and where electric power is used, the equivalent of that electric power in terms of tons of coal. For each ton of fuel consumed in 1922 in freight service by locomotives the carriers derived 10,750 gross ton-miles. This was increased to 15,528 in 1939, an increase in fuel efficiency of 44.4 percent.

The Court: Q. That increased efficiency came primarily with the improvement in the locomotives themselves?

A. I think from three principal sources, your Honor. I think the improvement in the locomotive itself, the loco- [fol. 358] motive unit itself, is the most important factor; second, however, was the ~~improvement~~ improvement in the methods, the improved methods of handling the fuel, in handling it through the coal piles, in taking care of it and storing it, and in handling it into the engine; and third, there have been improvements, or at least, it might be put this way—there has been a much greater care exercised in the pur-

chase of fuel, particularly coal. In other words, better grades of fuel have been purchased, and of course, better results are obtained. But in my opinion the first of those three factors is by far the most important and has had the greatest effect—the larger and better locomotive.

Q. Doctor, I think in your comment upon Item Number 3, freight cars per freight train, you stated that this average should not be used as indicating the length of the typical freight train.

A. Yes.

Q. I will ask you if a somewhat similar comment does not apply to Item Number 4, net tons per freight train?

A. Yes, that is true. That is not the typical freight train. It is the average, a sort of composite of the freight trains of the United States, which indicates that there are [fol. 359] a great many freight trains which are operated with fewer tons than the average, and of course, a great many with more tons than the average.

Q. And the variation in service which you have described will equally apply to this average?

A. Yes.

[fol. 360] Mr. Mason:

Q. Does the ability or willingness or tendency of shippers to load to capacity or less than capacity have any effect upon the figures of net tons per freight train?

A. Yes, both on the net tons per car and on the net tons per train.

Q. In the manner which you described in connection with item No. 9?

A. Yes, sir.

Q. I think you have stated that the purpose of tendency on exhibit No. 22 is to indicate a greater efficiency in performance. Do the figures shown on this exhibit indicate anything else as to the railroad service?

A. I would make only this general comment, that a substantial increase in operating efficiency and in economy of operation which is strongly indicated by the figures on exhibit No. 22 could only have been achieved by adoption of the long train method of operation which is the basis of the mass transportation principle and that was what was made possible by the improvement program of 1923 and later years to which I have already adverted.

Q. Have you made for the purposes of this case or otherwise a survey of the railroad situation as of the present year, 1940?

[fol. 361] A. Yes.

Q. Based upon statistics coming to you through the Interstate Commerce Commission or otherwise during the first nine months of this year?

A. Yes.

Q. What is the most significant development during the first nine months of 1940?

A. Briefly summarized, I would say that the rather striking factors in the operations this year have been, first, an increase in the demand for freight traffic, demand for freight service by rail, a considerable increase to which I shall refer in particular in a moment, and, second, that despite that increased demand for service the financial returns which the railways have been deriving from that increased demand have been less, have been reduced. In the last month or two as I shall show in a moment, their revenues have actually fallen off in the face of an increase in business and their expenses, their operating expenses have been going up in relation to the business with the result that the net has been considerably reduced.

Q. How do you measure the demand for freight service?

A. By the number of freight cars loaded and moved and by the number of ton miles.

[fol. 362] The Court: You referred a few moments ago to subsidized competition. Just what do you have reference to on that?

A. That is a large subject to enter upon, Your Honor, but briefly there are three forms of competition which the railroads face today which are largely or partially subsidized; those are the forms of transportation by air, by water, and by highway. I don't refer to the pipe line competition which is also serious but which is not subsidized. The growth of transportation by air, a very marked growth in the last few years, has been due almost wholly to government subsidies which are of two general types. First, the air mail subsidy with which I think we are all familiar, which has amounted to millions of dollars per year and which has enabled and is now enabling air carriers to haul passengers at much less than it costs to haul them. The rates charged to the passenger for his air travel is much lower than it costs the air line to handle him and the differ-

ence is made up out of this air mail subsidy. The second form of subsidy lies in the development of these municipal and other public airports and the development of the so-called "airways," lighted and marked airways which is done at the expense of ten to twenty million dollars a year [fol. 363] to the Federal government and I don't know how many millions of dollars per year to the various localities, municipal, state and other governments. All that represents service which the airlines receive at least at the expense of little charge to them or no charge at all. In the case of water carriers I think it is generally agreed that they are almost wholly subsidized in the sense that they receive from the government their rights of way, their canals, their rivers, their harbors free of all charges.

Q. I take it you are referring to those water carriers that actually compete with rail carriers to points in the United States?

A. Yes, I am speaking of what we call inland water transportation which would include coastwise, Great Lakes, and primary rivers and canals, all of which are furnished to the water carrier without any tolls being charged for the use of the public improved waterways. Just how much that subsidy amounts to it is almost impossible to say but it enables the water carriers to handle their traffic at much less than it would cost them were they required to pay tolls for the service by improved waterways. As to the highways, the question is not so simple and is a question which [fol. 364] is being greatly debated at the present time as to whether those who do commercial business over the highways in busses and trucks pay a sufficient fee in the form of gasoline taxes, tag taxes and other fees, whether they pay enough to offset the costs to the states and Federal government for the building and maintenance of the highways over which they operate. It is a very difficult question to solve or to secure a solution for but the railways believe there is a considerable subsidy to the commercial—I emphasize the word "commercial"—to the commercial carriers of freight and passengers by highways and to whatever extent that exists it means subsidized competition with which the railways find it more and more difficult to compete.

The Court: Are the railways subsidized in any way from the Federal treasury?

A. I would say at the present time they are not. "There is a good deal of discussion on the old land grants which they received some seventy years ago, but even in the case of the land grant there was always a consideration. The railroads agreed to give the government lower rates for government goods and that has been done for a period of seventy years, so that the land grants have been paid for a number of times over in those lower rates on government [fol. 365] troops, mail, and so forth.

The Court: Is there any end to that, lower rates to the government?

A. Congress enacted a law in the present session; the so-called "Transportation Act of 1940" which did remove some of the land grant reductions, not all of them but that was done only on condition that any particular railroad that wished land grant rates removed should file a rather complex document with the government, waiving any rights or claims it might have now or in the future to any land in land grant patents. So that was only a partial relief to the railroads in that particular respect.

The Court: All right, pardon the interruption. You may now go ahead.

Mr. Mason:

Q. How do the carloadings for the year 1940 for the period so far accrued compare with those in 1939?

A. Up to the beginning of October the carloadings this year ran generally higher than they did last year for the same period.

Q. Has there been any substantial change in passenger traffic volume as distinguished from freight traffic?

A. The passenger traffic in terms of volume has been about [fol. 366] the same as last year, in fact it has been a little greater. The passenger revenue, however, in terms of money has been less than last year.

Q. What has the effect been upon the gross revenue as reported to the Interstate Commerce Commission or otherwise available to you, Doctor, during 1940 as contrasted with 1939 for the latest period available?

A. Using the figures for the first nine months of 1940 and comparing certain factors with the corresponding periods of 1939 and also 1937 the results are as follows,

and I would like to say I am using 1937 there because that is the best year in terms of volume of traffic and all gross earnings that the railroads have had since the year 1930, it is the best of the last ten years, so I use it for the moment as a yardstick to show how we are operating this year compared with last year and also with 1937. The operating revenues this year have been greater than in 1939 by two hundred sixty-four million dollars but less than in 1937 by forty-nine million dollars. These figures are all for a nine-month period, not an annual period. The operating expenses this year have been greater than in 1939 by one hundred forty-six million dollars but less [fol. 367] than in 1937 by sixty-nine million dollars. The taxes paid by the railroads have been greater this year than in 1939 by \$35,500,000.00 and have been also greater than in 1937 by fifty-two million dollars. The net railway operating income after expenses and taxes have been greater than in 1939 by eighty-five million dollars but less than in 1937 by thirty million dollars. The rate of return on property investments has been 2.36 per cent in 1940, 1.91 per cent in 1939, and 2.54 per cent in 1937. The net income after fixed charges for the first eight months of 1940 has been greater than in 1939 by one hundred million dollars, 1939 having been in the red during the first eight months, having been a net deficit instead of net income, but the net income this year is less this year than 1937 by thirty-eight million dollars.

Q. Have you the figures for the month of September, 1940?

A. More significant perhaps than these figures for nine months are the figures for September which is the latest of the nine months. In that month, September, 1940, operating revenues were only one and one-half million dollars greater than last September while operating expenses in [fol. 368] creased by nine million dollars, taxes increased by five million dollars and the net railway operating income fell off by twelve million dollars.

Q. Are you able from the figures already at hand, including carloadings, and based upon your experience as a director of the Bureau of Railroad Economics to make any forecast as the prospects for the balance of 1940?

Mr. Strouss: My objection goes to this—with the understanding we have had I haven't made any objection to this

testimony but my understanding with the court has been that my objection goes to all this testimony.

The Court: That is true, but we are getting into entirely different territory now.

Mr. Strouss: I think that they have been for quite a while.

Mr. Mason: I think the data for 1940 for the first nine months—

The Court: I will sustain the objection to the last question.

Mr. Strouss: Let me understand here now, am I supposed to make my objection from now on on each question?

The Court: No, that won't be necessary. However, this last question, it was not what the facts and figures show [fol. 369] but was calling for a conclusion or estimate of this witness as to what conditions would be over the entire year, in other words, problematical rather than being based on facts and figures.

Mr. Strouss: My objection heretofore made would go to all the testimony that has gone in.

The Court: I so understood it.

Mr. Mason: I don't want to argue the question now that the ruling has been made but I do suggest that this witness has in his position and with his experience is in a better position to make such a forecast probably more than any other person in the United States.

The Court: That is probably true but just what help that would be to the court of how material or relevant it would be is a question.

Mr. Mason: I don't intend to press the matter.

The Court: I will stand on the ruling.

Mr. Mason:

Q. Have you been able from the material already at hand to compute any indexes of efficiency of operation for the nine months of the year 1940 which are already available and completed?

A. Yes, I have them complete from the Interstate Commerce Commission's records.

Q. Will you state, having in mind the indexes of efficiency [fol. 370] on exhibit No. 22—have you figures for the year 1940, first nine months corresponding to this?

A. Yes, they show generally the first nine months of 1940 were operated at an even higher and better efficiency.

level than the corresponding months of 1939 and the year 1939 as indicated in exhibit No. 22 showed the best results of any year of which we have record, and that is despite the fact that the revenues have been generally downward and expenses upward in the current year. Now, during these first nine months of 1940 the average number of freight cars per train increased by one and one-half cars or 3.1 per cent compared with the corresponding nine months of 1939. The average freight train load which on exhibit No. 22 is item 4, there shown as net tons per freight train or freight train load, the average freight train load increased by fifty-five tons this year or 6.9 per cent. Freight train speed was almost exactly the same this year as last, showing a fraction of one-tenth of one mile less per hour. The gross ton mile per freight train hour increased by 1,253 ton miles or 3.9 per cent. The net ton miles per freight train hour increased by 832 ton miles or 6.3 per cent. Taken as a whole the efficiency of railway performance, [fol. 371] freight performance during the first nine months of 1940 was at the highest level in the history of the railroads.

Mr. Strouss: May I call the court's attention, this testimony just given, is a conclusion drawn from records and figures which are not anywhere in this record.

Mr. Mason: I will ask you to identify if you will, Doctor, the Interstate Commerce Commission report or statistical issues which have been consulted by you for the purposes of the testimony relative to the year 1940.

A. They are the monthly summaries of the Interstate Commerce Commission dealing with these various factors which are shown on exhibit No. 22. In other words, the monthly summaries of the Interstate Commerce Commission which is entitled, "Freight Train Performance, Class I, Steam Railways in the United States," and another summary which is issued monthly by the Commission entitled, "Fuel and Power for Locomotives and Rail Motor Cars."

Q. You have identified on exhibit No. 22 the number 1939 and prior issues. Do I understand that these summaries are issued monthly and are accumulated by months for a calendar year?

[fol. 372] A. Yes, that is correct, so that the issue for September, 1940, is the cumulative figures for this nine-month period I have been discussing.

The Court: Do you have those pamphlets with you here in the courtroom?

A. We have here in the courtroom, Your Honor, those two monthly summaries for the month of August, 1940, which gives the summary for the first eight months of 1940. The returns for the nine months ending September 30th had not been actually published by the Commission at the time I left Washington and our figures for those nine months were copied from the worksheets of the Commission. I have the August summaries here.

The Court: Which you will make available?

A. Which can be made available, yes, sir.

Mr. Mason:

Q. The other is taken from the advance sheet worked out by the Commission's employees in the Bureau of Statistics at the Commission's office in Washington?

A. Yes, sir.

The Court: We will take a brief recess at this time.

Thereupon at 3 P. M., November 26, 1940, a short recess was taken and after which proceedings were resumed as follows:

[fol. 373] Mr. Mason: Your Honor, that concludes, unless you have some questions yourself at this time, the direct examination for the time being of Dr. Parmelee and with the concurrence of opposing counsel we propose to withdraw him from the stand at this time but return at their convenience within a day or so for cross-examination so that we may put on another witness.

The Court: That is agreeable?

Mr. Strouss: Oh, yes, it was my understanding we could use him tomorrow.

Mr. Mason: Before Dr. Parmelee leaves the stand I should like the record to show that I am furnishing to opposing counsel certain original documents or printed documents issued by the Interstate Commerce Commission bearing the designation, "Freight Train Performance, Class I, Steam Railways in the United States," for various months up to and including December, 1939, and also documents bearing the designation, "Fuel and Power for Loco-

motives and Rail Motor Cars for Class I, Steam Railways in the United States," for consecutive months up to December, 1939. Is that correct, Mr. Strouss?

Mr. Strouss: That is correct.

[fol. 374] Mr. Mason: I am also handing to Mr. Strouss for his use the August, 1940, counterparts of the statements which I have just described for the months up to December, 1939 and two statements which show official entries for the months of September, 1940 of the information available at the office of the Interstate Commerce Commission and taken from the work sheet there and placed upon these forms OSE and OSA for the month of September, 1940. Is that correct, Mr. Strouss?

Mr. Strouss: Yes.

Mr. Booth: I would like to ask Dr. Parmelee a question or two for the foundation of something I want to ask the next witness.

Q. Dr. Parmelee, I show a publication of 113 pages of statistics, the cover of which is entitled "Interstate Commerce Commission, Bureau of Statistics, Statement No. 39200, a Comparative Statement of Railway Operating Statistics of the Steam Railways in the United States, having annual operating Revenues of over \$5,000,000, Years 1938, 1937 and 1936" and ask you whether or not that is an official publication of the Interstate Commerce Commission, Bureau of Statistics?

A. Yes, that is an official publication and is issued every year, showing figures for three years, that is the current [fol. 375] year and the preceding two years.

Q. It confines the statistics to railways having annual operating revenues of over \$5,000,000?

A. Yes, sir.

Q. And the railroads are arranged by name and certain other classifications?

A. Yes.

(Witness excused.)

W. F. KIRK was called as a witness in behalf of the defendant and being first duly sworn, testified as follows:

Direct Examination.

By Mr. Booth:

Q. Will you state your name, residence and occupation?

A. W. F. Kirk, General Superintendent of Transportation, Missouri Pacific Railroad, St. Louis, Missouri.

Q. How long have you been engaged in the operation of steam railroads?

A. I have been in the service of the Missouri Pacific Railroad since 1901 as operator, dispatcher, train dispatcher, chief train dispatcher, train master, assistant superintendent, superintendent, general superintendent and [fol. 376] general superintendent of transportation, except for the period June, 1934 to June, 1935, when I was associated with the Federal Coordinator of Transportation as Assistant Regional Director in the Southwestern Region from June until December, as Assistant Regional Director in the Western Region, December to March, and as Eastern Regional Director, March until June 15. On my return to the Missouri Pacific Railroad I was assigned to special duties and given the title of Assistant General Manager in order to cover our Texas lines and served until March, 1936, when I was appointed General Superintendent of Transportation and have been in that position ever since, all of it in the operating department and having to do with train operations.

Q. In general, what are the duties of your present position as General Superintendent of Transportation?

A. The movement and loading of trains, the furnishing of equipment, passenger and freight, the allocation of locomotives to the various divisions making up the system, the making of schedules and supervising the operation of the trains over the entire railroad.

Q. You report to whom?

[fol. 377] A. The chief operating officer.

Q. Have you access to the records in the operating and accounting departments of the Company?

A. I have.

Q. Is it part of your duties to be familiar and are you familiar with the various types of locomotives operated

by the Missouri Pacific Railroad Company and with the various types of equipment, both of freight and passenger so operated?

A: Yes, insofar as the locomotives are concerned to get the most efficient locomotive on the territory where it can be operated and as to passenger equipment, that which is wanted by the people, especially our traffic people soliciting business for special parties and I have to know the types of cars and as to freight equipment, that which is ordered by the shippers of the division, people who pass it to our office for fulfilling.

Q: During your employment with the Missouri Pacific and particularly since you were train dispatcher, has it likewise been a part of your duty to know and do you know, the general types of locomotives and cars, both freight and passenger, that were in use by that Company, either through ownership or operation on its line?

[fol. 378] A: Yes, sir.

Mr. Booth: I have here a map which I will ask to have marked as an exhibit.

The Clerk: Exhibit No. 23 for identification.

Mr. Booth: Which is entitled "Missouri Pacific Railroad Company," an outline map marked Defendants' Exhibit No. 23 for identification.

Q: Mr. Kirk, does that correctly represent the railroad lines operated by the Missouri Pacific Railroad Company in the states shown in outline on the map?

A: Yes, as an outline that is very good, it covers the ten states in which we operate, into and out of.

Q: Your principal point of connection, these lines with other railroads are on what points?

A: At Alexandria on the south we connect with the Southern Pacific, Rock Island, Louisiana and Arkansas and the Texas & Pacific. At Texarkana we connect with the Kansas City Southern, the Cotton Belt and Texas & Pacific. At Omaha we connect with the Union Pacific, Northwestern, Rock Island, Great Western, Milwaukee, C. St. P. & O., M. & O. and the Illinois Central. At Memphis we connect with the N. C. & St. L., the Louisville & Nashville, the Frisco, Illinois Central and the Southern Route.

[fol. 379] Q: At Pueblo, with what railroads?

A: With the Denver & Rio Grande, Colorado & Southern

and the Santa Fe. At Kansas City we connect with ten railroads, at St. Louis with eleven.

Q. Including the eastern trunk line at St. Louis?

A. Yes, with the Pennsylvania and New York Central, the B. & O., Nickel Plate, C. & E. I., Chicago & Alton.

Q. You spoke of serving as Assistant Regional Director to the Federal Coordinator of Transportation. Was that Mr. Joseph B. Eastman, a member of the Interstate Commerce Commission?

A. Yes sir, the present chairman.

Q. Did you serve under the Emergency Transportation Act of Congress of 1933?

A. That is correct.

Q. Did you take an oath of office with the Federal Government?

A. I did.

Q. And were paid by the Federal Government?

A. That is correct.

Q. Were all of your activities while you were in such service, activities as an official of the Federal Government? [fol. 380] A. They were.

Q. What was your first assignment and first general work as Assistant Regional Director?

A. After the passage of the transportation act, and it called for certain things, the railroads set up in each region—

Mr. Strouss: May the record show our objection to this?

The Court: Yes.

(The witness continuing)

A. —set up in each region—

Mr. Booth: This is all preliminary.

The Witness (continuing): —a regional board of railroad executives and through those regional boards they directed in accordance with the law a study to be made of the various terminals within their respective regions as to the feasibility and practicability of coordinating such forces and facilities without impairment to the service to bring about greater economies to the carriers. There was also set up a staff by the coordinators, of which I was a member, to assist in the making up of the studies at the various terminals throughout the territory and after the railroads had submitted their reports to the Regional Rail-

road Board, they were passed to the Regional Director [fol. 381] for his study and analysis to determine whether or not the possibilities of coordination had all been found. Then it devolved upon the Regional Director and his assistants to go to such terminals and look into them and develop whether or not the possibilities had been found, and in many instances it was necessary to call the local committee into session to develop some of the things that we did not believe had been properly brought out.

Mr. Booth:

Q. In a particular locality, what was that work called, a project?

A. It was called a project, yes.

Q. In your first assignment as Assistant Regional Director how many projects were there in your district?

A. 947.

Q. That district included what states?

A. That included from a point, including Alexandria, all of Louisiana north; Arkansas, Texas, Arizona, Kansas, Nebraska, a portion of Colorado and a portion of Missouri. The only portion of Missouri not included was Kansas City and St. Louis.

Q. And the eastern portion of Colorado, I assume, was included?

A. The eastern portion, Pueblo, yes, at Pueblo but not Denver.

[fol. 382] Q. Were these 947 projects pretty generally distributed throughout the territory you have named?

A. They were. As each project was set up, two railroads had a crossing at a certain point and they each had a station there. It was set up as a project to develop whether or not one agent or one station couldn't do all the business instead of two. So it took in some very small and some very large projects.

Q. Will you mention some of the very large projects?

A. Fort Worth, Texas; Dallas, Texas; Alexandria, La.; Little Rock, Arkansas; Pueblo, Colo.; Houston, Texas; St. Joe, Mo. I believe they were the largest in that territory.

Q. Did you visit the cities you have just named in your official capacity for the purpose of investigating and mak-

ing recommendations concerning the feasibility of the projects so-called and located in these various cities?

A. Yes, the major points, I visited all of those and at a major portion of the points I called together the local committee who had made the report and went over the report as to how they had set up the greatest possible economies from their viewpoint and then I generally [fol. 383] spent a day or two or three making observations myself as to the actual operation. The greatest tendency in the report was to consider the largest facilities of the railroads located there and many of them fell down on account of the expense that would be charged to the other lines reaching them.

Q. A matter of a line wanting to keep its place in the sun?

A. That is correct, and it was necessary to give closer observation to the capacity of the yards than anything else for the reason that the work on and with the cars after they arrived at the terminal, both for forwarding and for placements was of such importance that the railroads could run into criticism much easier by a fall-down there than through any other point.

Q. Mr. Kirk, in the work which you have just described and at the points you have either designated or referred to, did you at that time acquire a knowledge of the manner in which freight traffic was handled in and out of those terminals and on the road, including the length of trains as to the number of cars and their division into long and short trains by which the traffic so handled?

A. Yes, that was necessary. It was necessary to have [fol. 384] that information. Of course, there was a record of it, but in order to assure myself of the fact that the record was right, I would make observations of the arrival and departure of freight trains in the various yards so that there wouldn't be any possibility of error.

Q. Will you state whether or not it was a general practice during that time you have testified and in the territory you have specified for freight traffic to be handled when and as the volume of traffic required trains of substantially a greater number of cars than seventy?

A. I do—

Mr. Strouss: My objection goes to this evidence.

[fol. 385]. Mr. Booth: I want to put in right here, if your honor please, a reference which I think applies particularly to this witness. The decision of the United States Supreme Court on the question of evidence—the decision is the case of Grayson vs. Lynch, 163 U. S. 468, 41 L. Ed. 230. An action by two private individuals in which the Government was not concerned. It was an action for loss or damage to a herd of cattle by fever claimed to have been communicated by a certain bunch of cattle from an infected herd in Texas. The Chief of the Bureau, who was in the services of the United States Government showed on the stand a familiarity of those diseases and was permitted to testify that in a particular region this fever was prevalent, although he had never been in that region, and he testified to it as the reports came to him in his official capacity. The court said, speaking of his official capacity, "In the nature of their business, in the correspondence of the department and in the investigation of such diseases, they would naturally become much better acquainted with the districts where such diseases originated or were prevalent, than if they had been merely local physicians and testified as to what came within their personal observation. The knowledge thus gained cannot properly be [fol. 386] spoken of as hearsay, since it was a part of their official duty to obtain such knowledge, and learn where such diseases originated or were prevalent, and how they became disseminated throughout the country."

Mr. Strouss: In order not to interrupt your examination, I was making the objection with the understanding that the same objection that I have heretofore made would apply to this witness' testimony.

Mr. Booth: That is perfectly agreeable, but I wanted to call the court's attention to this witness' qualifications, even though he had not been acting in an official capacity.

Q. Will you state whether as a result of your observation in your official capacity as well as in your individual capacity, it was a general practice in the terminals you have mentioned and in the territory you have mentioned to operate freight trains of substantially more than seventy cars when and as business offered?

A. That is correct. Where the business—where there is sufficient business and the physical conditions of the railroad and hauling power permit it, There were many of

these branch lines that operated very small car units and as a result they could not, but where there is business and [fol. 387] the power was sufficient to take care of it, I saw some trains that came into Lancaster and into Fort Worth with 150 cars.

Q. I refer now more particularly to the larger terminals which you have given by name, was that a general practice?

A. That is correct.

Q. During that period?

A. Yes, sir.

Q. Has that practice been continued?

A. It is continued to this day.

Q. Have you had occasion to observe the number of those terminals since?

A. Yes.

Q. Which ones?

A. Texarkana, St. Louis, Kansas City and Alexandria.

Q. Regarding your experience as a representative in the Eastern District, what would you say that was?

A. I was Director of the Eastern Region.

Q. And for how long?

A. From March 7, 1935 until June 16, 1935.

Q. During that period, how many of the so-called projects were there?

[fol. 388] A. They had at the time I left 3017 projects in the Eastern Region, which included the New England Territory. The Eastern Region took in Michigan, New York, Illinois, Ohio, Indiana, Pennsylvania, Virginia, Maryland and all of the New England States, including Maine, Vermont, New Hampshire and Connecticut, and Massachusetts, Rhode Island, New Jersey and Delaware.

Q. Would you list all of those, including the major cities in those states?

A. Philadelphia was one of the largest, New York City, Jersey, Buffalo and many of them much larger than any we have in the West.

Q. In general did you pursue the same official course in the Eastern territory that you did in the other territory, as you have described it?

A. Yes, sir.

Q. And found the same condition?

A. I found a greater volume of traffic and a greater volume of trains in excess of seventy cars.

Q. What official position in the railroad did you occupy in 1935 and 1936?

A. From June 16, 1935 until March 1, 1936 I occupied the position of Assistant General Manager of both the Missouri Pacific proper and the Texas Lines. I was assigned special work at the time and was given that title to [fol. 389] cover both territories.

Q. Did you make a special study of long-train operations on the Missouri Pacific during the Spring of 1935 for the purpose of testifying for the plaintiff, The Southern Pacific vs. Mashburn, Attorney General, which has been referred to as the Nevada train-limit case?

A. I did.

Q. At the time you made that study what was your observation as to the extent, relatively speaking, of the operation of long and short trains on the Missouri Pacific Lines and the lines connected with that system at that time?

A. The study was made more on the basis of what was taking place on the Missouri Pacific itself, and we were handling long trains at that time and they have on the average become longer since that time.

Q. What factors are determinative of the number of cars that shall be placed in a freight train, in your experience as an operating man?

A. In our actual operation it depends entirely upon the amount of tonnage available plus the necessity of maintaining the schedule. For example we have a train that is scheduled out of Kansas City at 8:30 A. M. and scheduled into St. Louis at 8:30 P. M. That is twelve hours or [fol. 390] 284 miles. If we get that train out by 9:00 A. M. we put on 125 cars. If we have to wait for some other connection we cut that to one hundred cars. The locomotive can still handle 125 cars, but the necessity of being in St. Louis in order to make the placement of perishables so that those trains can depart by 1:30 A. M., you have got to get in.

Mr. Booth: I will now offer Defendant's Exhibit 23 for identification as Defendant's Exhibit No. 23 in evidence.

Mr. Strouss: Same objection.

The Court: Same ruling.

The Clerk: Defendant's Exhibit 23 in evidence.

The Witness:

A. The black line extending from Kansas City to St. Louis is single track for 162 miles and the 284 miles is double track with the exception of the 162 miles. In other words, that curved line shows the single track and double track on the straight portion, and coming down on the east side of the river it is partially double track for 117 miles, and as we cross the river it is all single track from there to Alexandria. We branch out at the heavy line, that is single track, and it is only 35 miles of the line between Poplar Bluff and Little Rock that is double track [fol. 391] and 29 miles of the line between Little Rock and Texarkana is double track, the balance all being single.

Q. What is the mileage between Poplar Bluff and Little Rock?

A. One hundred and seventy-nine miles.

Q. And between Little Rock and Texarkana?

A. 136 miles.

Q. Over the line between Poplar Bluff and Texarkana, does your Company at the present, and has it for some time past, constantly operated trains of substantially over seventy cars in length when and as the traffic offered?

A. They have and do at the present time.

Q. And as to the line you described between Kansas City and St. Louis?

A. The same applies there. We have four trains a day between those points and there are three of them that never have less than one hundred cars.

Q. And between East St. Louis and Alexandria?

A. That is a territory that comes out of St. Louis and operates through with a train of empties of 125 cars. That is based entirely on the siding capacity between Paragould and McGehee.

Q. On a single-track road does the capacity of the siding control the length of the cars?

A. They do in some districts. In other words, if you've [fol. 392] got 80-car siding track and handling 125 cars, you only want 125 cars on the one direction, you would be limited 85 cars on the other.

Q. As to the line between Pueblo and Kansas City, is that single track?

A. That is a single track road.

Q. Do you classify that as a main line?

A. Yes, sir.

Q. Do you constantly operate more than seventy cars?

A. East bound, yes, West bound, no. East bound we handle our average train that is taking care of the perishables originating in northern California, which come to us through Pueblo, and our average length runs between 75 and 80 cars. That is also dependent upon the time of the arrival of connections, because there is very little originating business at Pueblo.

Q. Is that average due to the volume of traffic?

A. To the grade line and in some instances due to the volume of traffic. It is 627 miles and we will give them up to 80 cars if they can get out by 3:30. If the connections are late and they can't get out until 5:00, we have never felt that we should make that run in less than nineteen [fol. 393] and one-half hours.

Q. Does that limitation apply partly by reason of the grade and partly by the connection or character of locomotive power?

A. It was then controlled up until, I would say, the first of the coming month by the motive power, and due to some bridges; but they expect to have them all increased in strength by the First of December and at that time we will put locomotives out that can handle 85 cars.

Q. What other factors go to limit those trains except the ones that you have mentioned.

A. That is all.

Q. Is your line between Omaha and Kansas City that is shown on this exhibit classified as main line?

A. It is.

Q. And is it your practice to operate trains of substantially more than seventy cars?

A. It is between Kansas City and Atchison. That would be the first line branch out to the right. And from there there are very severe grades and they handle 115 empties, but west-bound we very seldom get more than 71 or 72 cars.

Q. You have a number of branch lines on your road? [fol. 394] A. Yes, over 30% of our railroad is branch lines.

Q. What class of communities do they serve?

A. With the exception of those in Arkansas they all serve agricultural.

Q. Is it your practice to operate trains longer than seventy cars along those lines?

A. No, because we do not have the business and never have had, and in addition they have never been fixed up for heavier power. About the maximum train that we can handle runs around 45 to 50 cars. There isn't sufficient future that we can see to that country to justify any expenditure for bridges, and that is what it would mean, because we have heavy rails out on those lines.

Q. Those are the feeder lines of the main line?

A. That is correct.

Q. Calling your attention to the document that was identified by Doctor Parmelee in answer to questions by myself, statement No. 39200 of the Inter-state Commerce Commission, at page 98, line 79, Missouri Railroad Company, that is the title of your company, is not not?

A. That is correct. It happens to be in the hands of the Court at the present time.

[fol. 395] Q. Column 276 gives the average number of freight cars per freight train, exclusive of the caboose for the years 1936, 1937, 1938, and for the year 1936 it is 44.7 cars, for the year 1937 45.1 cars, and for the year 1938, 46 cars, I will ask you whether those average figures as they are given are typical of what you consider to be your representative freight train on the Missouri Pacific?

A. I would say that is typical of the average cars per freight train mile on the road. There isn't any question on that. To bring that out it would run into a question, take first, we have three branch lines where we have discontinued except tri-weekly freight service. All of the mail, baggage and express are shipped by truck, and we run the train out there three days a week. Those are counted as trains and counted as train miles, and we are obligated to run three days a week if we only handle the caboose. That is under the orders of the Inter-state Commerce Commission. That goes in to make the average of 46 or 47 average of cars. Those kind of operations show that, the 46 cars as shown in 1938, is an average number of cars per train mile, but it doesn't mean the smallest train or the largest.

[fol. 396] Q. Getting at it in another way, you said about 30% of the mileage is the branch-line mileage, do the seventy-car trains run to any extent on the branch lines?

A. There isn't any on the branch lines. They are all on the main lines, because we haven't sufficient traffic to build up seventy cars.

Q. But the branch line trains get into the average just the same?

A. Yes.

Q. What is the character of the country traversed by the lines of the Missouri Pacific?

A. Outside of one crossing of the Ozark mountains in Missouri, I would say somewhat level down in Arkansas. We have a fairly even grade line. We have some 2% grades in the Ozarks. Up in Colorado we have 1.18% grades, and on the Omaha division we have as high as 1.45% line grades.

Q. Are any of your freight trains operating on any of this territory?

A. Yes.

Q. Your grades average approximately how much?

A. 1.18%.

Q. What do you understand the term "ruling grades"?

[fol. 397] A. It means the grade that governs the largest amount of traffic that you can move over that particular grade.

Q. The grade on which the locomotive has to exercise the greatest effort?

A. Yes.

The Court:

Q. In other words it is the maximum grade on that particular line?

A. Yes, the maximum grade on that particular line.

Q. There may be short grades possibly which are greater than the ruling grade, but the ruling grades are those which control the tonnage?

A. That is correct. The grades you have reference to are momentum grades.

The Court: We will take our evening recess at this time. The Court will be at recess until 10 o'clock tomorrow morning.

[fol. 398] November 27, 1940. 10:00 A. M.

All parties being present as heretofore noted, proceedings were resumed as follows:

W. T. KIRK, a witness called on behalf of the defendant, resumed the stand and testified as follows:

The Court: You may proceed, gentlemen.

Mr. Strouss: If the court please, before proceeding with the taking of testimony, there is one matter in the record I would like to straighten out. I appear to have made an admission, which I certainly did not intend to make. In the statement to me, in handing these papers to me, Mr. Mason, I notice as to the sheet for September, 1940, the statement is, "that shows official entries". I do not know whether those are official entries or not. The sheet, as I think Mr. Mason will agree, is the form for making reports to the Commission, and there are certain entries in lead pencil on it. What those entries are and who put them there I have no information, and I don't want to be taken as admitting that they are official records.

Mr. Mason: What page is that?

Mr. Strouss: 374.

[fol. 399] The Court: Well, the record may show the statement this morning.

Mr. Mason: Mr. Strouss, perhaps we could satisfy you for the record of the official character of those so that you would be willing to make the same admission. Perhaps you would prefer to have us call a witness for that purpose. But I would like to discuss the matter with you during the recess.

Mr. Strouss: That is all right.

Mr. Booth: I will ask Mr. Mason to proceed with his direct examination.

The Court: I take it there is no objection to that?

Mr. Strouss: No objection.

Mr. Mason:

Q. Mr. Kirk, I think near the conclusion of your testimony yesterday you were testifying as to the operation of your trains in various territories and as to the grades that are encountered in some of these districts. Do I understand that you have grades as high as 2% on main lines on the Ozark mountains and in southern Missouri?

A. That is correct. Our main line passenger line. We operate very few freight trains over that line.

Q. You have grades as high as 1.45% on the freight line [fol. 400] between Kansas City and Omaha?

A. That is correct.

Mr. Strauss: Of course, this testimony is all subject to my objection that the records are the best evidence?

The Court: Objection overruled.

Mr. Mason:

Q. Do you have any territory in the districts you have referred to where you use more than one locomotive?

A. We use a helper locomotive out of St. Louis west and into St. Louis from the west, a distance of six miles east bound and twelve miles west bound. We use a helper between Osawatimie and Wagstaff, Kansas. That is on east bound. We use a helper between Atchison, Kansas, and Shannon, Kansas, west bound on the Kansas City to Omaha line, and east bound from Falls City, Nebraska, to Hiawatha, Kansas. In addition we help out of the yard at Falls City, Nebraska, west bound with a yard engine, and help out of Omaha east bound with a yard engine. Then on the main line between St. Louis and Little Rock, or St. Louis and Poplar Bluff, where we have the 2% grade with any passenger train over eleven cars we help from Bismarck, Missouri, to Piedmont, Mo., a distance of about 40 miles on account of mountain grades in in both directions.

[fol. 401] Mr. Strauss: In calling attention to my objection the last time I just stated the one ground. Of course, I intended my objection to be noted on all the grounds that we have heretofore stated.

The Court: Yes.

Mr. Mason:

Q. Does the Missouri Pacific have in its agreements with the trains of its Brotherhoods the rule relating to double-heading which has been previously testified to in other testimony?

A. It does.

Q. You are generally familiar with the agreement in effect in the western territory in effect between the railroad companies and the Brotherhoods, are you not?

A. Yes.

Q. And is that helper rule or double-header rule a standard rule in territory west of the Mississippi River generally?

A. An agreement, a standard agreement.

Q. Are you familiar with the code of operating rules of the Association of American Railroads?

A. I am, and the Missouri Pacific has adopted that code. [fol. 402] Q. And your operating rules governing the movement of trains generally conform to the Association Code, do they?

A. They do, in fact we have just made up the book rules effective November 1, 1940, and so many of the standard rules, in fact all of the standard rules adopted by the American Association of Railroads which are adopted by the Rock Island and the St. Louis and Southwestern Railroads are incorporated in it, so that we got out a joint book of rules that governs the three lines.

Q. Mr. Kirk, are you familiar with the character of traffic handled by the Missouri Pacific, as to its classification, as between perishable and manufactured products, products of agriculture, products of mineral or other products and so forth?

A. I am.

Q. Does the Missouri Pacific handle any substantial volume of agricultural products?

A. Yes, the Missouri Pacific traverses an agricultural territory. During the months of June and July up to the 14th of August, this year, we loaded over 12,000 cars of wheat on the Missouri Pacific. In addition to that we have corn, move all of it that isn't milled. We originate perishable freight in our Colorado territory and our Louisiana [fol. 403] territory. We originate the products of mines in the Ozark territory of Missouri and in the southeastern Kansas territory, for instance, in the lead field. We originate coal in Arkansas, Illinois and Kansas.

Q. Do you participate in any petroleum products traffic?

A. To a considerable extent. We have fourteen refineries on the railroad.

Q. Do you reach the producing fields there directly or through connections in Oklahoma, Arkansas, Louisiana and Texas.

A. Yes, we do.

Q. And southeastern Kansas?

A. That is correct.

Q. Does livestock transportation constitute any substantial part of the traffic handled by the Missouri Pacific?

A. I would say in recent years it has diminished to a considerable extent, but about $1\frac{1}{2}\%$ of our traffic is livestock moving to the markets, the Eastern markets.

Q. Does the Missouri Pacific Railroad or through its connections, serve any important livestock producing areas?

A. Well, indirectly we get livestock from the New [fol. 404] Mexico, Texas, Arizona territories and points west where it moves into the Eastern markets. Through our connections we originate considerable livestock in Louisiana, Kansas and Missouri.

Q. Now, as to the perishable traffic, and I refer particularly to vegetable products rather than meat, does the Missouri Pacific participate in the handling of perishable traffic originating in the Mountain and Pacific territory?

A. They do, to a considerable extent, through the Pueblo and Texarkana gateways. We are a party to through-schedules through points originating in the far west, California and Arizona, and such points to the Atlantic Seaboard.

Q. What particular areas of production originate traffic which you receive at the Texarkana gateway?

A. That through the Imperial and Salt River Valley and Southern California.

Q. Does that include the Arizona production?

A. The Salt River Valley is included as in Arizona.

Q. Do you handle perishable products originating in south Texas?

A. Oh, yes, in the Rio Grande Valley as well as the San [fol. 405] Antonio and Laredo area.

Q. Where does that reach your lines?

A. That reaches us through Texarkana, the Rio Grande Valley both through Texarkana and Alexandria, the major portion through Alexandria. We handled 89,000 of perishables in 1939 through the connections, not originally, but through connections.

Q. Do you include in that fresh meats and perishable products as well?

A. No, just perishable fruits and vegetables.

Q. Do you participate in the handling of fresh meat and dairy products as well.

A. To a considerable extent through the packing industries at Omaha, St. Joe, Kansas City, and the East and Southeast.

Q. As Superintendent of Transportation have you become familiar with the schedules for the handling of freight in which the Missouri Pacific participates?

A. I make them for our railroads.

Q. Will you say whether or not your company joins with other carriers in offering schedules for the handling of freight from and to the points of production and consumption?

A. We do. I happen to be chairman of the Southwestern Advisory Schedule Committee, which has the making up of [fol. 406] the schedules through the St. Louis, Omaha, Kansas City, Memphis, New Orleans, Texarkana, Pueblo and Alexandria gateways.

Q. Do you know, and if so, will you state whether the Southern Pacific is a party to any schedules with the Missouri Pacific?

A. They are, on the schedules through Texarkana and Pueblo.

Q. And those are the schedules which relate to the handling of freight east and west bound from northern as well as southern California?

A. That is correct.

Q. Do those schedules also relate to the handling of traffic originating in Arizona, as well as moving across Arizona?

A. They do.

Q. Do they relate to the handling of traffic destined to Arizona?

A. They do.

Q. Do I understand these schedules apply not only east bound but also west bound between Arizona and Eastern points?

A. That is correct.

Q. Can you state when these east and west bound schedules were first formed and what the development has been?

[fol. 407] A. The east bound schedules were set up some time, as I recall it, in 1924 and 1925. That is when all of the railroads west of Chicago and west of St. Louis took on the agreement between the amount of time they would operate in connection with the—based on the miles of rail-

road involved. At that time the east bound schedules were 146 hours to Chicago.

Q. From what point?

A. From Roseville, a concentration point, which has been subsequently cut to 139 hours with a 16-hour run-off, making it about 123 hours at the present time.

Q. Roseville, California, I believe is shown on Defendant's Exhibit No. 1?

A. That is correct. That is a concentration on the Southern Pacific.

Q. That is a Northern California concentration point?

A. That is a Northern California concentration point.

Q. Has a similar schedule been maintained through, over the southern routes from Southern California concentration points?

A. That is correct.

Q. And what is the Southern California concentration [fol. 408] point on the Southern Pacific, if you know?

A. I think it is Bakersfield. I am not sure about that.

Q. That schedule applies in connection with movements across Arizona and via El Paso to the East?

A. Yes.

Q. What is the route over which this traffic moves after reaching El Paso and in order to reach your line at Texarkana, as I believe you mentioned?

A. It moves over the Texas and Pacific.

Q. That is a direct line across Texas from El Paso to Texarkana?

A. Yes, that is correct.

Q. Passing through Ft. Worth?

A. Passing through Ft. Worth, and the Santa Fe comes into Ft. Worth for some of the Southern California business, and they make deliveries there to us. The same schedule is maintained by all of the routes.

Q. Does that include the route of the Santa Fe through Northern Arizona? You say the same schedule is maintained?

A. Well, the same schedule is maintained over all of the routes to the Mississippi River crossing point.

[fol. 409] Q. Do similar schedules apply to traffic originating in the state of Arizona and moving to these Eastern destinations?

A. Yes.

Q. With allowances for the shorter haul?

A. That is correct.

Q. For example, does traffic originating in the neighborhood of Yuma and concentrating there have a schedule under which it would move?

A. That would be a fifth evening arrival at St. Louis compared with a sixth evening arrival at Bakersfield, sixth to St. Louis.

Q. And traffic originating in the neighborhood of Phoenix in the Salt River Valley, would that likewise move on a similar schedule?

A. When that season is open, a special schedule is put on by the Southern Pacific, Texas Pacific and the Missouri Pacific through St. Louis and Memphis. That is a fifth morning arrival at those points.

Q. That is approximately twelve hours less than the Yuma schedule?

A. That is correct.

Q. Or 24 hours less than the Bakersfield originating schedule?

[fol. 410] A. That is correct.

Q. Are you familiar with the station of Colton in California as shown on the map, Exhibit No. 1?

A. I am not familiar with it. Where is it located?

Q. Colton is about 58 miles east of Los Angeles.

A. Well, we maintain a block, a Colton block through both the gateways through Kansas City and the connection with the Rock Island, Santa Fe and Union Pacific, and through Texarkana over the Texas & Pacific.

Q. And I take it that the schedule that applies from Southern California, applies to the movement of this Colton block?

A. That is correct. It has a regular Colton block schedule.

Q. Do your schedules operate in connection with schedules of railroads east of the Mississippi River or Chicago?

A. Yes, from St. Louis, the Pennsylvania, Baltimore & Ohio, the New York Central and Nickel Plate; for the far east, and the Wabash and the Alton and the C. & E. I. for Chicago. They all operate on the 1:30 A. M. delivery of all of this traffic for the advertised delivery at the Eastern destinations. Now, on the Wabash and C. & E. I. and [fol. 411] the Alton to Chicago, they operate to make the same arrival at Chicago as the operations through Kansas City and Omaha gateways.

Q. You mean from those gateways direct to Chicago by the Missouri Pacific Lines?

A. That is correct.

Q. Now you say these schedules are maintained. Are they advertised or otherwise made public for the information of shippers?

A. They are extensively advertised by the traffic department of the railroad in order to secure the movement of the business via the respective lines, and are maintained. I might explain this maintenance. The reason for maintaining the schedule is that there is an agreement between the railroads, on a definite cut-off time at any of the junction points—take St. Louis, for example. At 1:30 a.m. if you don't deliver the freight by 1:30 a.m. that means that if it is delivered at 1:31 a.m. the Missouri Pacific assumes any claim that may come up on account of the failure to make these schedules and as a result of the failure of the deliveries to make the connections at the Kansas, Mississippi and Missouri River crossings we make our schedules 90 per cent of the time because we don't care to assume those claims.

[fol. 412] Q. You speak of claims. Do I understand that the railroads not only advertise these schedules to the shippers and owners of freight, but claims may arise because of failure to comply with those schedules as to delivery?

A. That is correct, that is when the claims are claimed, when we fail to comply with the schedule we advertise and guarantee.

Q. Would such claims include claims because of a decline in price and subsequent loss on account of failure to make delivery on an agreed and intended day?

A. The basis of the claim would be the failure of the carriers to give the guaranteed delivery as scheduled, yes.

Q. Do claims ever arise because of spoilage due to additional time in transit?

A. I presume so, because when we do miss out on a car, they generally have a claim for it. I have never seen the claims, but they always tell me how much they had to pay out because of my failure to give the guaranteed schedule.

Q. Then I take it that any schedule failures come right back to the Superintendent of Transportation?

A. They do. Some of the traffic boys seem to think I [fol. 413] do it personally.

Q. What is the character of the west bound traffic handled to transcontinental destinations by way of the Missouri Pacific?

A. It is practically all manufactured goods and there is a very heavy movement of automobile parts that go through the assembly plants in the far West, and manufactured goods of all kinds.

Q. Does that include manufactured goods destined to Arizona as well as beyond Arizona?

A. Oh yes, Arizona and the West.

Q. Do you know, and if so will you state whether schedules are maintained for the west bound movements of this character of freight?

A. Yes, the same as East bound, on the basis—well, on the same basis. The delivery is set up from the far Eastern points to all destinations in the West as to the exact time.

Q. Is this character of freight sometimes referred to as "manifest freight"?

A. Yes, it is all manifest freight now.

Q. I take it that your coal and crude oil perhaps may not be handled as manifest?

A. Well, some of the complaints you get, if you lay it out for 8 or 10 hours, would indicate they want it for breakfast, or take brick, for example. I might say that a certain [fol. 414] party had a contract for the construction of a brick building in Kansas City, and the brick were loaded at Ft. Scott, Kansas, the night before and they had to be placed at this building before 7:00 the following morning. But they would truck it so we placed it.

Q. Now, when were the west bound schedules first inaugurated, if you know?

A. I could not say just when, but I think about the same time that the east bound schedules were arranged. We have had greater expedition on those schedules in the last year than we had before. They have been materially reduced. In other words, there has been approximately a day taken off between Chicago and the California points. Of course, trains out of Chicago handle your intermediate business.

Q. In so far as your lines are concerned do you know what percentage of scheduled performance is made in this west bound movement?

A. In the neighborhood of 90%.

Q. Have you been supplied with copies of Exhibits No. 3 and 4, 5 and 6?

A. I have been supplied with Exhibits 2, 3 and 4.

Q. 2, 3, 4, 5 and 6?

[fol. 415] A. Yes, I have.

Q. Are you familiar with freight equipment owned and operated by the Missouri Pacific?

A. Certainly am. That is one of my main duties, to know the kinds the people want and supply them.

Q. Are you familiar with the equipment owned and operated by the Missouri Pacific during period since 1900 and particularly since 1912?

A. Well, I am acquainted with all of the equipment that we have had on our railroads since 1901, more so since 1917 when I was first appointed as Superintendent. I have seen all of the old 30-ton cars, but as a matter of fact, up until 1923 we did not have, but very few 40-ton cars on the railroad. They were all 30-ton cars of wood construction, and for revenue service at the present time all of our equipment, some 29,000 cars are either steel under frame—

Mr. Strouss: Now, if the court please, this testimony is certainly to matters of record and from which he could only get information from the records.

Mr. Booth: We submit, if the court please, that the Superintendent of Transportation of a railroad—

[fol. 46] Mr. Strouss: I would like to ask—

Mr. Booth: Pardon me.

Mr. Strouss: —a question or two on voir dire.

The Court: You may.

Mr. Strouss:

Q. Mr. Kirk, you don't intend to say that you personally see every car on your railway, on your system to examine it to determine whether it is steel under frame or if it is steel throughout, every type of improvement on that car; or do you take that from the records of your Company?

A. Well, I don't see them all, Mr. Strouss, but I do know the types of equipment that we have on the railroad. I must know for the reason that those are ordered. For

example, at the present time there is a greater demand for the larger capacity cars. I must know how many they have.

Q. How do you get that information?

A. Why, when we make up the building program and the re-building program, that is always submitted to me and I am asked what kind of cars we want. Now, as to the construction, the only thing is, I say we don't want any steel center sills or any wooden cars, but all the car construction on the Missouri Pacific is submitted to me, all the re-building program, the type of car.

[fol. 417] Q. When they are built and the cars are delivered then they come to you as a record of the Company, as to what they are actually?

A. The cars come and also the record of them come, yes.

Q. That is where you get your information as to what the actual cars are that are owned by the Company?

A. Well, I would say yes, but we must know just how many we have of the different types.

Q. And when you have cars go into the shops for repairs, what repairs are put on those cars, the information as to that you get through the records of your company, isn't that true?

A. Yes, but when they go in I tell them how high I want them and how wide I want them. I don't tell them just how they will be constructed, but I will say we don't want anything but steel under frame with a wooden superstructure, and if it is an all steel car, it must be all steel.

Q. But the car, after it leaves the shop, the condition it is in, that information comes to you?

A. It comes to me from the shop superintendent that it has been built that way.

Mr. Mason: Now, if the court please, I submit that information which the witness acquires in the regular course [fol. 418] of his duties and which is necessary for him to acquire in order for him to perform those duties at all, is a proper subject of this testimony.

The Court: I think so. Objection overruled. Go ahead.

Mr. Mason:

Q. Now, Mr. Kirk, do you make frequent trips over the Missouri Pacific System in the course of your duties?

A. I do, I am out on the road two-thirds of the time.

Q. And has that been necessary as a part of your duty ever since you have been an official of that company?

A. That is correct.

Q. Do you ever, while making such trips, have occasion to see the types of equipment being used by the Missouri Pacific in their freight trains?

A. Yes, both the Missouri Pacific and foreign line equipment.

Q. That would include not only company-owned, but also equipment coming to the Missouri Pacific?

A. Moving over the railroad under the per diem payment.

Q. Now, without addressing yourself to details, state whether or not the general development of the Missouri [fol. 419] Pacific equipment has tended toward stronger, larger cars with a greater percentage of steel construction, somewhat as indicated on Exhibit No. 2?

A. It has been, yes.

Q. Does the Missouri Pacific now operate any substantial number of wooden under frame cars, to your knowledge?

A. The Missouri Pacific at the present time has sixty-nine center sill cars, wooden, in revenue service that are rack cars hauling pulpwood between the local points and the paper mill at Bastrop, La. The balance of our cars are either all-steel or steel underframe, 2,947 in local service at the present time.

Q. Those move over interchange lines, do they not?

A. They do.

Q. Does the Missouri Pacific handle cars owned by other companies or by private companies?

A. They do.

Q. Does that include cars of the Pacific Fruit Express Co.

A. That is correct.

Q. Will you say whether or not the Pacific Fruit Express Co. cars are handled by you in substantial volume? [fol. 420] A. They are, in substantial volume, yes, coming from Northern California especially.

Q. Have you received any PFE cars carrying products loaded in Southern California or Arizona, or moving through southern gateways?

A. Yes, we do.

Q. Does the Missouri Pacific have refrigerator cars of its own ownership?

A. The American Transportation Co., The American Refrigerator Transportation, A. R. T. Co. is owned by the Missouri Pacific and the Wabash. They have some 17,000, and we use those on our railroads as extensively as possible. Of course, we are always subject to the shippers demands as to the kind of car they want.

Q. You have observed these A. R. T. refrigerator cars, have you?

A. Yes.

Q. And likewise the Pacific Fruit Express Co. cars?

A. Yes.

Q. Are the A. R. T. cars of similar type to the PFE cars?

A. They are.

Q. Used for substantially the same purpose?

[fol. 421] A. That is correct.

Q. Are you familiar with the passenger train equipment owned and used by the Missouri Pacific?

A. I am.

Q. Is that part of your duties as General Superintendent of Transportation?

A. It is.

Mr. Strouss: Of course, our objection is going to all of this.

The Court: Yes.

Mr. Mason:

Q. And in the course of your duties in that position have you become familiar with the general type of construction of the Missouri Pacific passenger train cars?

A. I have. We have 457 steel cars and 51 steel under frame passenger cars at present.

[fol. 422] Mr. Mason:

Q. Do you operate any passenger train cars of wooden construction?

A. No, we do not.

Q. Have you familiarized yourself generally with exhibit No. 4?

A. I have.

Q. Will you state whether or not the developments on Missouri Pacific passenger train cars particularly since 1912 has been along the same general lines as indicated by that exhibit?

A. That is correct.

Q. Do you operate on your lines any of these types identified as being placed in service in 1937 and 1939, these so-called articulated and streamlined units?

A. We haven't any of the articulated. We have the streamlined cars, two trains operating between St. Louis and Omaha and we have another one that will be delivered within a short time to operate in the South.

Q. That is a Diesel electric operated streamlined train?

A. That is correct.

Q. Especially built for that service?

A. Yes, sir.

Q. I think in your initial qualifications you also stated [fol. 423] that in your position you have to do with the assignments of locomotives?

A. That is correct.

Q. In the assignment of locomotives do you become familiar with the construction and particularly the capacity of your locomotives?

A. Particularly the capacity and the construction, yes.

Q. I take it that it is necessary in order that the assignment may be intelligently carried out?

A. That is correct.

Q. Will you refer first to defendant's exhibit No. 5 which relates to freight locomotives.

A. On the ten wheel type 4-6-0, we have one of those left on our road.

Q. I think you have exhibit No. 6.

A. I beg your pardon. The 2-6-0 type, we have 62 of those locomotives on our line, they are used principally on branch lines.

Q. Are your Moguls of the 2-6-0 locomotives all about the same hauling capacity expressed in tractive power?

A. We run from twenty-four thousand up to twenty-nine thousand pounds of the 4-6-0. However, we don't call them Moguls, we call them Consolidations. On the Consolidations [fol. 424] the 2-8-0s, we have 234 of such locomotives with tractive effort running from 33,000 to 43,600. On the Mikados we have three classes of those, what we term the

1200, 1300, and 14-1500. The tractive effort of those runs from 54,725 to 68,675 pounds.

Q. Apparently somewhat larger than the Mikados depicted here?

A. That is correct. The 2-10-2s, we call these the Santa Fe type on our railroad and we have 28 of those that the tractive efforts runs from 72,300 to 81,600. Then we have eight of those with what we call a booster on them that handle 111,000 pounds of tractive effort. Those are used in the Omaha division exclusively on account of the severe grades up there.

Q. These locomotives other than those which have the addition of the booster correspond I take it to the 2-10-2s shown on this exhibit?

A. That is right. In addition we have 20 locomotives of the 2-8-4 type which are called the Berkshires. They have a tractive effort of 69,400 pounds. Those engines are now going through the shop and being supplied with a 75-inch driver to permit of a dual passenger or freight service. When they come out they will have a tractive effort of 71,100 pounds.

[fol. 425] Q. You say those are on 2-8-4 wheeled engines?

A. Yes, sir.

Q. And don't correspond exactly to anything shown on this exhibit.

A. That is correct.

Q. Are these larger locomotives, the 2-10-2, the Berkshires and the larger Mikados of which you have spoken recent acquisitions?

A. All of these have been purchased since 1924, that is the large Mikados and the Berkshires and the Santa Fes.

Q. Will you turn to the passenger locomotive exhibit No. 6. I think you started to refer to the 10-wheeler type.

A. Yes, we have one of those left, used on a branch line. Of the second class we have, the Pacific type is the next we have twenty of those of around 30,000 tractive effort and we have 76 second-class Pacifics 4-6-2 with 47,000 pounds tractive effort. Then we come to the Mountain type we have 26 of those that run from 63,000 tractive effort to 67,000, I say 67, that is on some what we have just rebuilt which have been equipped with roller bearings and gadgets, all the latest gadgets on it and instead of running 284 miles on the trip we run them 672 miles.

[fol. 426] Q. Those runs of 672 miles must take you across more than one state?

A. Oh, yes, take us through Missouri, through Kansas, almost within twenty miles of the Colorado line.

Q. In operating or making up the runs of your freight and passenger locomotives do you pay any particular attention to state boundaries?

A. None at all.

Q. You have no locomotives in passenger service I take it that correspond exactly to the Golden State type shown here?

A. No, the closest we have is the Mountain type with the 4-8-2.

Q. I think you mentioned that they have a tractive effort of some 63,000 pounds or more?

A. That is correct.

Q. Which would correspond in capacity to the Golden State?

A. Yes.

Q. Did you state whether these passenger locomotives as to the larger types were recent acquisitions?

A. We had 16 in 1925 and the other 10 in 1928.

Q. You spoke of having them rebuilt?

A. Yes, all of the smaller Mountain type, the 63 thousands are all being rebuilt at the present time, increasing [fol. 427] their steam pressure, the size of the wheels and equipping them with roller bearings.

Q. Mr. Kirk, do you know whether or not there are full crew laws in any of the states in which the Missouri Pacific operates?

A. Yes, we have them in Arkansas and Nebraska. In Nebraska over five cars in a passenger train you put the second man on. However, there is a recent court decision instituted in the state has permitted that second man to be a train porter rather than a brakeman. Then you have a freight train limit calling for a third brakeman on a local freight run extending over one hundred miles.

Q. A local freight run?

A. A local freight run, but I don't believe any of the railroads in Nebraska run them one hundred miles. In Arkansas we have a third brakeman for each train over 24 cars. It could be two hundred cars after it reaches the twenty-fourth but after the twenty-fourth car you must add the third brakeman and he applies only within the state.

We have one operation where we make up the train at Van Buren, Arkansas, or have one coming into Van Buren, Arkansas, a division point, that traverses 161 miles of its route in Kansas and Oklahoma and the third brakeman is put on for the additional five miles in or five miles out. [fol. 428] We have to stop the train at Greenwood Junction in order for him to board the caboose and get off the caboose.

Q. Otherwise your operations from Missouri down into Arkansas, you add the third brakeman at the state line?

A. That is correct and we have that the same eighteen miles out of McGehee, Arkansas. We can haul 125 cars with the third brakeman 618 miles and we stop and let him get off and if we come along with more than 24 cars he gets on.

Q. Do you observe any standard requirement as to crews of freight trains in Missouri, Kansas, or Oklahoma.

A. The only observance we have is an agreement with our men where we have a local freight train or a short load train, that we will provide the third brakeman. The short load train, there has been an agreement, we have taken the less than carload merchandise off the trains and put it into motor vehicles for distribution. Consequently we run what we term a short load train if we have any short loads. It is quite possible at times there is only one or two within the distance between these terminals and some through freight train can take care of that traffic and we are sub- [fol. 429] ject to no penalty unless the switch is as much as two hours. If he switches as much as two hours in doing that kind of job they are paid the local freight rate of pay instead of the through freight rate of pay but on the regular through trains that way there are only two brakemen.

Q. You just use a head and rear brakeman?

A. Yes.

Q. Conductor, engineer, and fireman?

A. That is right.

Mr. Stross: Now we are having by oral testimony the contents of an agreement brought in here.

Mr. Mason: But the witness being the superintendent of transportation certainly knows the conditions which effect his operation as the superintendent.

The Court: He seems to.

Mr. Strouss: He may know the conditions but I submit that still does not permit a violation of the best evidence

rule, where the contents of an agreement are sought to be put in evidence that the agreement itself is the best evidence.

Mr. Mason: I think the gist of the testimony was what the company does by reason of the agreement rather than what the agreement requires. At least that was the purpose [fol. 430] pose.

Q. I think you have stated, Mr. Kirk, that you make frequent trips over the railroad lines?

A. I do, very frequent.

Q. Do you make those trips exclusively on passenger trains?

A. No, I make them on all kinds of trains, freight trains, mixed trains, and passenger trains. Most of the trips made—it depends upon the urgency of my being at a certain point. Some places the urgency requires it to be made on a freight train on account of the connections at various points on the line. I make a number of trips, only last week I made a trip of 323 miles from Winn, Arkansas, to Alexandria, Louisiana, on the rear of a freight train, my office car attached behind the caboose.

Q. I will ask you whether you are able to select the freight train upon which you are to ride?

A. Well, I can always select it, it depends on when I want to leave and when I want to get there, if we have one going at that time, but if you have any reference to reducing the number of cars the answer is "No." I just say I want to go out on No. 65 or No. 61, they put me on that particular train.

[fol. 431] Q. Do they consult you how many cars they shall put in the train before putting your business car behind the caboose.

A. They do not.

Q. You spoke of a recent trip from Winn to Alexandria with your business car attached to the train. How many cars were in the train?

A. We had 101 loads and the caboose and my car making a total of 103 cars.

Q. Did you travel in that fashion behind the 101 freight cars and the caboose for the 300 miles or more?

A. I did.

Q. Have you made other trips this year with the business car behind the freight train?

A. Oh, yes, we have reduced our passenger service on many of the lines so that there are left only the night passengers, and such as that. I want to see the railroad in the daytime, see the cars at the various stations, visit the terminals, I ride the freight trains in order to do that.

Q. Have you ridden behind trains of more than 70 cars during the course of this present year?

A. Oh, yes, many of them, 96, 86, some less than 70, some high as I mentioned, 103 cars including my car and the caboose and I want to say that I got some better rides on [fol. 432] those freight trains than I did on the passenger trains.

Mr. Strouss: I object to that, Your Honor.

The Court: Yes, objection sustained, the last part may be stricken.

Mr. Mason: From "I want to say"——

The Court: Yes.

Mr. Mason:

Q. What is the character of the territory between Winn and Alexandria over which you rode?

A. From Winn to Riverton, Louisiana, generally rolling and from Riverton—that is about 90 miles—very undulating, up and down, through the hills around the Red River and the Washita River.

Q. Are you familiar with the circumstances which govern the length of the trains operated by the Missouri Pacific?

A. Yes, it is volume of traffic and the schedule requirements, we generally have the proper locomotive to handle the business.

Q. Do siding lengths enter into the picture at all?

A. They do in certain instances, yes. They don't enter into it if there isn't any train interference. With the limited number of trains it is just the same as a double track.

[fol. 433] Q. From your observations of the Missouri Pacific system will you say whether or not you have any automatic block signals on your main line?

A. Yes, we have our entire line from Texarkana, from Alexandria through Little Rock to St. Louis, St. Louis to Pueblo, Kansas City to Omaha, Kansas City to Coffeyville. We have about 2,612 miles of signals at the present time and that does not include 375 miles of centralized traffic control.

Q. Do you know, and if so, will you state what the standard weight of rail is on your main line?

A. The present standard on the primary main line is 112 pounds.

Q. Do you use any heavier rail on curves?

A. Very little.

Q. Do you have speed limits governing the operation of freight trains, I mean other than those which may be applied particularly at curves?

A. We have restrictions at various parts of the territory. It depends upon the curvature. We have in the past few years reduced our curves in many places in order to facilitate better riding but we have a freight train speed limit from Pueblo, Colorado, to Kansas City of 55 miles an hour. Passenger train speed limits from Pueblo to Hoisington, Kansas, is 85 miles an hour and from Hoisington to Kansas [fol. 434] City, 75. Between St. Louis and Kansas City, 75 miles an hour, in fact St. Louis to Omaha. From St. Louis to the bottom of the Piedmont we have a maximum of 60 miles an hour, that is due to very severe curves.

Q. These are passenger trains?

A. Yes, freight trains, 45 in that territory. From Piedmont to Texarkana the maximum speed allowable is 75.

Q. Is there a maximum speed for freights?

A. Freight trains, 50. On the streamlined trains which we call the Eagles on the Missouri Pacific they are permitted to run ten miles above the allowable speed of the steam trains.

The Court: We will take our morning recess of ten minutes at this time.

Thereupon a short recess was taken after which proceedings were resumed as follows:

The Court: You may proceed, gentlemen.

Mr. Mason:

Q. Mr. Kirk, you mentioned a trip from Winn to Alexandria with a through train. Will you state for the record the other trips, if any, made during the current year by you in your car behind through trains with the distance and the number of cars in the train?

A. I don't recall all the trips I made but I did make a [fol. 435] trip from McGehee to Alexandria, that is 190

miles with 77 cars; Hoisington, Kansas, to Osawatomie, 226 miles on a 61-car train; Alexandria to Little Rock, 293 miles in a 67-car train; Little Rock to Poplar Bluff, 178 miles with an 82-car train; McGehee to Dubo, 404 miles, 96-car train; Marquette to Osawatomie, 173 miles in a 58-car train.

Q. You also stated I think that the standard of main line construction contemplates rail of 112 pounds, weight per yard. Does that represent the replacement of lighter rail previously in the track?

A. Yes, it replaces 85-pound rail that was formerly in the track.

The Court: Do I understand that 112 pounds means for a foot or a yard?

A. A yard; that is, A. A. R. standard. That replaces steel of 85 pounds to the yard.

Mr. Mason:

Q. Mr. Kirk, the common railroad expression is to refer to rail as 85-pound rail or 90-pound rail or 112 pound?

A. 112, 113, 131 and 139. One hundred thirty-nine is the largest rail I have heard of.

Q. Those weights in pounds are the pounds per yard, are they?

[fol. 436] A. That is correct. We have some 131 on the curves between St. Louis and Poplar Bluff in the Ozark Mountains.

Q. Does the installation of block signals over the sum of more than two thousand miles that you mentioned represent an extension of your block signal system?

A. Yes, we had less than 400 miles in 1922.

Q. You spoke of 374 miles of centralized traffic control. Is that all in one district?

A. No, that is separated. We have 53 miles between Kansas City, Missouri, and Atchison, Kansas, and 57 miles between Leads, Missouri, and Osawatomie, Kansas; we have 124 miles between Jefferson City, Missouri, and St. Louis, Missouri.

Q. Does that centralized traffic control in those districts represent replacement of preexisting automatic block system?

A. It does.

Q. Has any mileage of the Missouri Pacific been double tracked where previously there was single track?

A. Yes, about 138 miles since 1922.

Q. Are you familiar with the operation of centralized traffic control?

A. I am very familiar with it.

[fol. 437] Q. Will you briefly describe just how centralized traffic control differs from ordinary movement over districts equipped with block signals?

A. I will explain the oldest system on the Missouri Pacific which is between Kansas City and Atchison, a distance of 53 miles. In that 53 miles we have nine sidetracks. All of the operations by any train is by the indication of the signal which is controlled by one man at a central point. In other words, he is at Leavenworth, 20 miles one way and 34 miles the other way. He opens and closes all of the switches for all trains in that particular area so when the train leaves Atchison it will be guided by the signals as he approaches them and if the signal indicates to him he must head in at the next siding, he must reduce his speed to what we call a number 20 turn-out, a long turn-out to 30 miles an hour to go in there safely and he is on the side track. No member of the crew has to handle any of the switches at all; he handles them all. When the other train passes the man at Leavenworth lets them out. We have found it to be a very good bridge between single track and double track. In other words, it takes up where there isn't sufficient traffic [fol. 438] for double track but too much for single track. It fills in that gap, and we have 116 miles more of it under construction now.

The Court: You term that centralized control?

A. Centralized traffic control, yes, sir.

Mr. Mason:

Q. Centralized traffic control as applied on the Missouri Pacific to lines where the main track is single rather than double?

A. That is correct. I will say we do have some in the double track territory where both tracks are signalled for a moment in either direction can throw them over to one track in the opposite direction and use both, that is, three tracks instead of two.

Q. Are you familiar with the bridges and bridge construction on the Missouri Pacific to any extent?

A. Well, only to the extent of the removal of wooden structures and strengthening them in order to handle the heavier power to permit of a greater train load in certain areas.

Q. Is it necessary for you to know about the strength of bridges in order to be able to assign power?

A. That is correct. We have a rating on all bridges on the railroad and you don't put an engine of heavier weight [fol. 439] than that particular rating for the bridge.

Q. Has there been any program of bridge replacement or construction?

A. We have had quite a program since 1922 and removed some 3800 bridges and changed approximately the same number from wooden to steel or concrete structure.

Q. Are there any limitations on main lines now as to weight of locomotives by reason of strength of bridges?

A. Yes, we have some on our Western territory which will be O. K. by December 1st and then between Alexandria and Little Rock they will be O. K. around the first of the year to permit the operation of heavier power.

Q. Are you familiar with the average road speed of your through freight trains over the past several years?

A. Yes, I have to be.

Q. Has there been any change in the average speed of your through freight trains as between 1922, for example, and the present or last year?

A. On our through freight trains in 1922 we averaged 16.6 miles per hour while in 1939 we have increased that to 22.4. That applies to through freight trains which handle a greater train load.

[fol. 440] Q. Those are the through freight trains in which the traffic from and to Arizona and California would be handled?

A. That is correct. Some of that speed has been increased due to the fact of augmenting the water capacity on the locomotives from their regular tank or tender of 15,000 gallons by equipping a tank car that holds 10,000 gallons and attaching it to the engine tank, avoiding the stops between terminals.

Q. That is a water car attached immediately behind the tender?

A. That is correct, and operates as part of the locomotive. It is not counted as a car in the train, it is part of the locomotive.

Q. I direct your attention to a statement of one sheet bearing title, "Missouri Pacific Railroad Company Freight Operating and Freight Transportation Expense Related to Traffic, Calendar Years 1922 to 1939." May that be marked?

The Court: It may be marked for identification.

The Clerk: Defendant's exhibit No. 24 for identification.

Mr. Mason:

Q. Have you that exhibit before you, Mr. Kirk?

[fol. 441] A. I have.

Q. You are familiar with the fact that this exhibit was prepared for the purposes of this case?

A. It was.

Mr. Mason: Your Honor, we have marked this for identification at this point in order to preserve the sequence of exhibits and associate this with the Missouri Pacific Railroad Company witness. We do not desire to offer it at this time but will undertake to establish the authenticity of the figures of the underlying document by a later witness.

Q. I will ask you, Mr. Kirk, if you will also refer to a statement of one sheet bearing title, "Missouri Pacific Railroad Company Freight Service, Operating Averages, Calendar Years 1922, etc., to 1938 and 1939." Have you that statement before you?

A. I have.

Q. Will you state whether or not that exhibit was prepared for the purpose of this case?

A. It was.

Q. You are familiar to some extent with its preparation?

A. I am.

Mr. Mason: May we have the statement just referred to [fol. 442] for identification defendant's exhibit No. 25?

The Court: It may be marked.

The document referred to was marked defendant's exhibit No. 25 for identification.

Mr. Mason: As to No. 25, Your Honor, we again make the same statement as to No. 24.

Q. I will ask you if you will please refer to a statement of one sheet entitled, "Missouri Pacific Railway Company

Typical Examples of Freight Trains Handled between Certain Terminals, April 1-10, 1939." Have you that before you?

A. I have.

Q. Was that exhibit prepared for the purposes of this case?

A. It was.

Mr. Mason: May we have that marked No. 26 for identification?

The Clerk: Twenty-six for identification.

Mr. Mason:

Q. Did you personally prepare No. 26?

A. I personally prepared No. 26 from the train sheets over which the record is made of the trains running, and spot-checked the trip reports of the conductors, not of each of these trains but with each train's dispatcher to verify his accuracy in copying the original report onto the [fol. 443] sheet.

Q. Is this exhibit other than as to ruling grade based entirely upon your study of the train sheets and trip reports?

A. That is correct.

Q. And has been personally checked against the dispatcher's train sheet covering the districts or divisions shown in the "from" and "to" columns on the exhibit?

A. That is correct.

Q. Except as to the computations have you made any check of the computations at the foot of the exhibit?

A. Yes; I checked this before I sent it out.

Q. Those are based upon the figures appearing above, are they?

A. That is correct.

Q. What is the information on ruling grade, is that information which you yourself have personal knowledge of?

A. That is correct.

Q. Does the showing upon the exhibit of ruling grade between the points shown correspond of your own knowledge of the conditions in that territory?

A. That is correct.

Q. Are the mileages themselves taken from the dispatcher's train sheets.

A. That is correct, and the timetables.

Q. Certain types of locomotives are shown. Do those types of locomotives correspond to your descriptions heretofore made in your oral testimony?

A. They do, and the distances in miles with the exception of the first two show the actual run by one train crew as between the points. Between St. Louis and Kansas City, Missouri, the crews change at 122 and 162 miles respectively at Jefferson City. It is 122 miles from St. Louis to Jefferson City and 162 from Jefferson City to Kansas City.

Q. Does the traffic represented upon exhibit No. 26 insofar as its character, volume, and handling is concerned as shown on the exhibit, reasonably reflect conditions as they prevail in these several districts?

A. Over the balance of a year, except during the seasonal move of citrus and vegetables from the Rio Grande Valley and the coal from the Illinois fields when the train lengths and the tons will be greater. That is a seasonal move, you understand. This is a typical all-year-round move except the seasonal operation.

Q. This is typical of the normal rather than the heavier [fol. 445] traffic during those particular periods you have mentioned?

A. That is correct.

Q. Does it correspond with your own personal knowledge of the handling of traffic on the Missouri Pacific?

A. That is correct.

Q. Will you say whether or not the exhibit correctly reflects the information shown on the dispatcher's train sheets and in the conductors' train books?

A. It shows what the train sheets showed because I personally checked and drew off from one hundred train sheets this information and spot-checks that I made as to the efficiency of the train dispatcher in copying the information from the conductors' reports of which I checked each train dispatcher is substantially correct.

Mr. Strouss: They are going a long ways there.

[fol. 446] Mr. Mason: Mr. Strouss, would you like to ask any questions about Exhibit No. 26, which has been offered?

Mr. Strouss:

Q. Why was April taken as a typical month over the entire run, of the general conditions of operations, instead of some other month?

A. Because that is a typical month over the entire run of the general conditions.

Q. It is what you selected as a typical month?

A. That is correct.

Mr. Booth:

Q. Is traffic heavier in 1940 than in 1939?

A. Not appreciably, no.

Mr. Strouss:

Q. The exhibit shows a ten day period in April, 1939, I was asking the witness why that particular period was used as the basis of this exhibit. That was the reason for my question to him, Your Honor.

Mr. Strouss:

Q. Now, the information on this exhibit, of course, are matters which are taken from the records, that is mostly from the train sheets?

A. That is correct.

Q. You spoke about your own knowledge as to ruling [fol. 447] grades, ruling grades upon—which are shown upon this exhibit are the ruling grades determined by your engineering department, are they not?

A. Yes, as to the whole capacity over those grades. Of course, I know what these are.

Q. The ruling grades shown, showing 1% and .5%, those classes shown on the exhibit are grades determined by your engineering department, that is correct?

A. Yes, that is correct.

Q. And the information here shown you took from the records which were made by your engineering department?

A. That is correct.

Mr. Strouss: That is all.

Mr. Mason:

Q. Your knowledge as to these ruling grades is part of the knowledge necessary to you in your capacity as Gen-

eral Superintendent of Transportation?

A. Yes, it is very necessary.

The Court:

Q. Mr. Kirk, none of the records from which this data is taken are here in Court. You don't have any of those records with you?

A. No, I don't have them. I can get them, but they are not here.

[fol. 448] Mr. Mason:

Q. Would you say how many train sheets you have examined for the purpose of this report?

A. For a ten-day period, ten train sheets, so it took 100 train sheets to check that up.

Mr. Mason: We offer that in evidence as Defendant's Exhibit No. 26.

Mr. Strouss: Same objections.

The Court: Subject to the objections made it may be admitted. In order to be consistent I am going to admit that in evidence. I am saying to counsel, there is a real question as to these exhibits which you are preparing from books and records which are not available for the examination of opposing counsel, and as the opportunity presents itself I am going to study these authorities. I, of course, reserve the right to make such ultimate ruling on these exhibits as the law will justify. You may proceed.

The Clerk: Defendant's Exhibit No. 26, admitted in evidence.

Mr. Booth:

Q. Mr. Kirk, let me ask you this question: If this exhibit No. 26 had been prepared by anyone in your organization, without your ever seeing the train sheets or any of the underlying data to which you yourself resorted, and had [fol. 449] been presented to you, could you from your own knowledge have said that the exhibit was a typical exhibit of train movement volume and character of traffic. This is for the period in question?

Mr. Strouss: We object to that, your Honor.

The Court: Objection sustained.

Mr. Mason:

Q. Is there any particular feature not heretofore discussed to which you wish to call attention?

A. I believe not.

Mr. Mason: You may cross-examine.

Cross-examination.

Mr. Strouss:

Q. Of course, these matters to which you have testified, such as the percentage of movement of cars a week handled by your system, the bridges which were replaced or reconstructed, that type of evidence is all information which you have acquired from the records of your company, that is true?

A. The loading and the percentage of performance, all those are records that are made directly to me and compiled by me.

Q. But they are records of your company?

A. That is correct.

Q. And the information from which they are compiled are records of your company?

[fol. 450] A. That is correct.

Q. You testified with respect to the average cars on the train, of course, that is determined from the records of your company?

A. That is correct.

Q. By the way, in making your reports to the I. C. C. you are required to segregate your main lines and branch line operations?

A. I couldn't answer that question.

Q. You don't know whether or not there would be a record of your company which would show what the actual car average is on your main line operations?

A. I am of the opinion it is set into main line and branch line, and divided as to 1, 2, and 3 tracks, something like that.

Q. You spoke about your locomotives having an additional water tank, and that that permitted you to attain a greater average speed. That same result would be reached in a longer distance between terminals of the division, that is true?

A. I don't believe I quite understand.

Q. In other words, you acquired a greater average speed because you had a larger water tank which didn't require stops to take water. Now, if your division terminals are a [fol. 451] greater distance apart, so that locomotives would operate more miles between division terminals without stops, that would have the same result would it not?

A. That is correct. We operate 161 miles without a stop on the eastern division.

Q. And you have some divisions even longer than that?

A. That is a crew division. We operate a crew division as long as 228 miles.

Q. This double-header rule, will you just explain again what that is?

A. The double-header rule on the Missouri Pacific is that we will not double head to handle more tonnage than the largest locomotive attached to the train will handle, except that you can double head at any time with forty cars. In the wheat rush in the northern Kansas territory we can't run but the smallest locomotives out there and one of them can't handle forty cars, so we put two on, but not over forty cars.

Q. You said that was a standard agreement with Western railroads?

A. Yes.

Q. You mean that same agreement is in effect with all western railroads?

A. That is right.

[fol. 452] Q. Do you know what the Santa Fe double header rule is?

A. No I don't, but it has been my understanding that it was the same with all Western roads.

Q. Have you ever heard of a double-header rule on the Western roads which has a limitation tonnage on the train?

A. No, I have not.

Q. But you wouldn't say for certainty?

A. That could be a fact. I have never heard of them.

Q. I mean, you wouldn't say as a certainty that there is a double-header rule on all Western roads?

A. No. It is my understanding that it is, and it is all I can say about it. I don't know definitely.

Q. Have you ever seen the double-header rule that is in effect on the Southern Pacific?

A. I have not.

Mr. Strouss: That is all.

The Court: You may be excused, Mr. Kirk.

The Court: Do I understand we are now proceeding with the cross-examination of Dr. Parmelee?

[fol. 453] Mr. Mason: That is true.

The Court: You may resume the witness stand, Dr. Parmelee.

DR. PARMELEE.

Cross-examination.

By Mr. Strouss:

Q. Doctor, referring to your exhibit, as I understand it is to show the expenditures made for equipment, roadway structures, in general, over the period shown; that is correct?

A. Yes, the capital expenditures. The expenditures which are charged to capital account.

Q. And under the heading of equipment, that would include improvements in existing equipment?

A. Yes. If it is charged to capital, yes.

Q. The usual accounting practice would be to charge such improvements at least as additions to the existing property as a capital investment?

A. Yes, that is a usual practice where there is an additional facility added to the equipment, that would ordinarily be a capital expenditure.

Q. Under roadway and structures, that, I take it, would include such items as grade and curve elimination, grade crossing operations, and things of that sort?

A. Yes.

Q. New bridges?

[fol. 454] A. New bridges if they are placed in somewhat better form. Improved, strengthened, enlarged, or better material; steel and concrete in place of wood.

Q. And on steel rails where the existing rails were replaced by a heavier rail, that would be included in that item?

A. Yes, that is the excess weight of the heavier rail, but not the mere replacement of the same rail. For example, if a 100 pound rail is replaced by a 130 pound rail, the 100 pounds would be charged to maintenance and the excess or thirty pounds is charged to capital investment.

Q. What is included under the heading "general" in column (d)?

A. The larger part of that consists of what is known as interest during construction, and taxes during construction, clerical work that goes on in connection with improvement work, and possibly some supervisory expense.

Q. General overhead on any items of construction which are chargeable to construction would go in that?

A. Yes.

Q. This data was taken, I believe you testified, from the statistics of railways in the United States, that is correct, [fol. 455] isn't it?

A. Yes.

Q. And the particular information here that doesn't represent a copy of reports which are filed by the Class I railroads, an exact copy of any report, does it Doctor. To make my question a little more understandable, it is in itself a computation or summary, that is, the I. C. C. document is itself a summary and computation in that it takes from the reports of each of these Class I railways the figures of that year and then by arithmetic arrives at the figures which are shown in the I. C. C. document, and which are set forth here?

A. Yes, that is correct.

Q. That is true of each of these I. C. C. reports or documents which you have used as a basis of your exhibits which have been introduced here?

A. Yes, those are all summaries of the individual reports filed by the railroads of Class I with the Commission.

Q. Now, your exhibit No. 16, as I understand it, is to show the trend of revenue as on the decline during the period which is covered here, is that correct?

[fol. 456] A. That is what it does show. That wasn't the purpose. The purpose was to show the exact trend, and that appears to be the trend.

Q. Of course, it doesn't purport to show the causes?

A. No, this is merely statement of the actual trend for these particular years and these particular averages.

Q. And exhibit No. 17, that is to show the trend of earnings of railway employees over the period?

A. All of the factors, the man-hours and total compensation and the average earnings of the employees.

Q. Is this based on columns (e) and (f), average earnings per employee per hour and per year, is that based on the man-hours paid for man-hours actually worked?

A. It is all based on man-hours paid for. I would like to say that those computations are the computations of the Interstate Commerce Commission. I think, in my testimony yesterday, I stated the computations were those made by my organization. On a later check I find they were taken from the Commission's own reports.

Q. This exhibit, course, is limited to hours worked and [fol. 457] compensation of railway employees. It doesn't purport to show what the trend is, or was, or was not in any other industry during this period, or that the trend of the railways were any different than any other industry?

A. No, it covers the railways of Class 1.

Q. And covers all employees in charge of transportation?

A. This particular exhibit includes all the employees of the railroads.

Q. Exhibit No. 18 is a similar exhibit, which is limited to train and engine service of employees?

A. Yes.

Q. And, of course, what you have said regarding Exhibit 17 would apply to 18, insofar as these particular employees are concerned?

A. Yes, including the comment I just made about columns (e) and (f). Those two are taken from the commission's own reports. They are copied item for item from the commission's report.

Q. In Exhibit No. 19, Doctor, I notice in your testimony you made some comment about the fact that item 10, return on property investment, and item 9, net railway operating income, that this return on property investment was the [fol. 458] return which is allowed by the Commission and it is before paying of interest, I didn't understand you as criticising the use of that basis for return on investment?

A. No. Perhaps I didn't make myself quite clear. I merely said that this return corresponds to the rate of return as worked out by the Interstate Commerce Commission in its attempt to arrive at, what the transportation act of 1920, called a rate on railroad value. There was no thought of making any criticisms. I simply wanted to indicate that this is the usual way of computing that particular percentage.

Q. And it is the usual thing to base the return on investment on the value of property, and that return would be determined before payment of interest charges?

A. Yes.

Q. Now, your exhibit No. 20 is to show the trend in operating expense, is that correct, Dr.?

A. That does show the trend, yes, in both the total operating expense assigned to freight and freight transportation and also the expense per unit, per ton mile in other words.

Q. It, of course, reflects deductions due to any and all causes, and not to any particular cause, speaking about the [fol. 459] exhibit itself?

A. You mean there are a number of factors involved in any year's expense. My answer to that would be yes.

Q. And they are all reflected in that?

A. Yes.

Q. Isn't it a fact, Doctor, that in 1922 there was a coal strike?

A. I don't recall whether that was 1921 or 1922. There were some coal strikes at that time.

Q. And, of course, if there were that would affect the price of coal at that time?

A. I don't know what the effect was, so far as the railroads are concerned. I assume you mean the price of coal to the railroads. I don't know what effect it did have at that time.

Q. Of course, if there was such an item reflected in the expense of 1922, you would not consider that a normal expense?

A. No, if there was such an item in that year I would agree with you.

Q. In 1922 or 1923 there was a strike of the railway shopmen, was there not Doctor?

A. That was either 1921 or 1922. I am not quite clear in my recollection as to which it was.

Q. The effects of that strike—by that I mean equipment [fol. 460] which had not been repaired during the time the shopmen were out—in that way and possibly other ways, reached the industry in subsequent years, wouldn't that be true Doctor?

A. Your question, as I understand it, is that there might have been some maintenance which would normally have

been done in that year which wasn't done on account of the strike, and that might have reverted to some later years?

Q. There might have been greater damage to the equipment while the men were out which would have affected the operating expense at that time?

A. I suppose it is possible yes. Your first alternative, if anything, would indicate that the maintenance expense particularly were lower than normal in 1922, because of those facts.

Q. You mean because the men were out, you didn't have to pay them?

A. Yes, and by the materials and all other expenses which go into maintenance accounts.

Q. But whatever the effect may have been, of course, that would not be a normal condition?

A. I think you could hardly pick a year in railroad operations where there were not some unusual factors. If you were to ask me to pick a normal year I would not be able [fol. 461] to do so.

Q. We were in a depression in 1922, at that time?

A. We were just coming out of the 1921 depression. I don't think you could call 1922 a depression year, judging by the standards of that particular period.

Q. Of course, what has been said about Exhibit No. 20 would be true of Exhibit No. 21?

A. Yes.

The Court: It is evident you won't be able to complete the cross-examination, so we will take our noon recess at this time.

[fol. 462] Wednesday, November 27, 1940. 2:00 P. M.

All parties being present as heretofore noted, proceedings were resumed as follows:

Mr. Mason: Your honor, this morning Mr. Strouss called attention to and discussed documents, I mean in regard to certain documents which were furnished to him, the record of which reads at page 374 of the transcript of yesterday's proceedings. As a result of the discussion off the record this morning, we have agreed—and I am stating this with the request that Mr. Strouss indicate his concurrence or disagreement if I am not correct—that if a wit-

ness were called, a competent witness could be called, rather, who would thereupon testify that the form OSE and the form OSA furnished to him yesterday and designated as relating to September, 1940, and reproduced in pencil figures for the first nine months of the year 1940, including September and also for the first nine months of 1939, including September, of findings which were taken by the witness from work-sheets in the Bureau of Statistics of the Interstate Commerce Commission, the work-sheets relating to the accumulated monthly summary covering the first nine months of 1940, which the Interstate Commerce Commission are themselves are about to prepare in printed form and issue. Is that correct?

Mr. Strouss: Yes, I will stipulate that if the witness were called he would so testify.

Mr. Mason: Will you also stipulate that the witness will testify that the figures which were placed upon this sheet and which are referred to are a true and correct transcription of the information received by him from the Interstate Commerce Commission?

Mr. Strouss: Yes.

Mr. Mason: I think it was also represented to Mr. Strouss, and I think you will agree with me that the Bureau of Railway Economics works very closely with the Bureau of Statistics, and the obtaining of the information from the Bureau of Statistics of the Interstate Commerce Commission, in this fashion, is the customary and ordinary course of conduct as between the bureaus.

Mr. Strouss: I will stipulate that he will so testify.

Mr. Mason: Yes.

The Court: Proceed with your cross-examination.

J. H. PARMELEE, a witness on behalf of the defendant, [fol. 464] resumes the stand and testifies further as follows:

Cross-examination (Cont'd.).

Resumed by Mr. Strouss:

Q. Doctor, referring to these Statistics of Railways in the United States, which is one of the publications of the Interstate Commerce Commission and used by you as a

basis for your exhibits and of your testimony—that is true, isn't it?

A. Yes.

Q. That publication follows very closely, does it not, in items and accounts the annual reports of the different railroads?

A. To the Interstate Commerce Commission?

Q. To the Interstate Commerce Commission.

A. Yes, and those forms, of course, are specified and laid down by the Commission.

Q. And the annual report, Form A, attached as part of Defendant's Exhibit 9 in evidence, have you seen this, Doctor?

A. Yes.

Q. That is one of the forms? That is the form of annual report?

A. Yes, sir.

Q. Used in reporting to the ICC?

A. That is the form used by railroads, of Class I.

[fol. 465] Q. Of Class I?

A. Yes.

Q. Now, where the item of operating expense is referred to and as taken from the Statistics of Railways in the United States, will you look at Exhibit 9 and tell me where that appears in that exhibit?

A. Are you speaking now of the total operating expenses?

Q. The total operating expenses.

A. That appears on page 300 of form A, line 4, Railway Operating Expenses.

Q. Well, it refers then to page 312 and 314 as a figure taken from that page, does it not, Doctor?

A. Yes, that is a summary of all the detailed operating expenses which are set out on pages 304 to 312, inclusive.

Q. And the item of operating expense shown in your exhibit is the summary of numerous annual reports of different railroads for that item?

A. Yes.

Mr. Booth: That is, it is the Commission's summary, is it not?

Mr. Strouss: I mean the Commission's summary.

A. Yes, I thought that was your question. It is the summary made by the staff of the Commission and published [fol. 466] by the Commission over its seal.

By Mr. Strouss:

Q. The document to which you referred, known as Fuel Power for Locomotives and Rail Motor Cars of Class I Steam Railroads, in the United States, August, 1940, for the eight months ending August, 1940 and 1939, that includes switching and terminal companies, does it not, Doctor?

A. Yes, that is right.

Q. And it is a summary or compilation of that data from reports of 171 railroads, I believe it is shown—

A. 171 steam railroads, 161 reports, representing 171 steam railways. That includes the Class I railways, so-called, and the Class I switching and terminal companies.

Q. Now, the publication of the Interstate Commerce Commission referred to as Freight Train Performance of Class I Steam Railways in the United States for the Eighth month ending August, 1940 and 1939, that excludes switching and terminal railways, does it not?

A. Yes, that is correct.

Q. And it is a summary of how many reports for how many railroads?

A. It is 128 reports representing 138 railways.

[fol. 467] Q. Of course, these documents that you have referred to are printed publications of the Interstate Commerce Commission, not authenticated or certified copies. That is true, isn't it, Doctor?

A. I don't know quite how to answer that question. I don't know what the legal status of these documents is. My understanding has always been that anything issued by the Interstate Commerce Commission with the seal of the Interstate Commerce Commission on it is an official document, but I am not debating the legal aspects of that.

Mr. Strouss: Mr. Mason, I would like to have in the record the character of the documents submitted for examination. Do you stipulate that these are not certified copies?

Mr. Mason: Well, I believe that we can best stipulate that they are authorized publications of the Commission promulgated by it in conformity with the provisions of

the Interstate Commerce Act and not certified, nor is it necessary—or authenticated by a certificate and seal specially affixed. They do bear on their face—at least some of them do—the facsimile seal of the Commission, and as such, under the Act, they are competent evidence in all courts of the United States and of the several states without any further proof or authentication.

[fol. 468] Mr. Strouss: Of course, I am not stipulating to anything of that sort.

Mr. Mason: No, I say I am stating my view.

The Court: What Mr. Strouss wants is a stipulation covering the facts. Then you gentlemen can argue the legal effect of it, I take it, later.

Mr. Mason: Of course, we can stipulate that there is no official certificate of the Commission attached to these reports that have been used by Dr. Parmelee and furnished to you as being the documents which he has used.

Mr. Strouss: They are printed publications.

Mr. Mason: Yes.

Mr. Strouss: Which are authorized under the Interstate Commerce Commission Act.

Mr. Mason: Yes, you agree that they are printed publications authorized to be made and issued by the Commission under the act?

Mr. Strouss: Yes.

Mr. Mason: Now, our stipulation should be distinguished that these are themselves reports submitted by the Commission as distinguished from matters on file with the Commission by carriers subject to the act and required by the Act to be filed with the Commission by such carriers. These are not matters filed with the Commission by the [fol. 469] carriers. These publications we have been referring to in this last testimony are the Commission's own publications. We understand the distinction.

Mr. Strouss:

Q. And these are the publications upon which you have built your exhibits, are they not, Doctor?

A. Certain of the exhibits, yes, in particular exhibit No.

22.
Q. I am now referring not only to these two publications, the Freight Train Performance of Class I Steam Railways and Fuel and Power Locomotives and Rail Motor?

Cars, Class I, Steam Railways, but including also the publication Statistics of Railways in the United States.

A. If you include the Statistics of Railways then my answer to your question is yes.

Q. These documents do not show the particular railroads that are included in the summary or compilation by the Interstate Commerce Commission.

A. I think perhaps I should answer that question this way: The Statistics of Railways is in two parts, two principal parts, the first part being a summary of the returns of Class I railways and of other classes of railways as well. Those are in separate parts of the summary. And the [fol. 470] second principal part consists of actual transcripts of the reports of Class I railways; so, the Statistics of Railways this document includes both the summaries and the individual railways returns.

Q. You mean the volume "Statistics of Railways in the United States," includes as a part of that volume a complete copy of each of the annual reports?

A. It is not complete in every detail, no, but I think it includes all the statistics which are included in my exhibits.

Q. It does, I take it, set up the railroads which are included within the different classifications, Class I, II and III.

A. Particularly the Class I railway group, yes. As to the other classes, the smaller railways, the showing is a very condensed showing, but as to the Class I railway group it is a very complete and comprehensive showing for the group.

Q. A showing for each district?

A. Yes, alphabetically arranged in each district.

Q. As I remember, you testified you had appeared before Congress in connection with some proposed legislation there with relation to the length of trains?

[fol. 471] A. Yes.

Q. Was one of those bills which you referred to a bill proposing to give to the Interstate Commission power or authority to regulate the length of trains?

A. I don't think so. I don't think I personally appeared with respect to any such a bill as that. There may have been such a bill before Congress.

The Court: You did testify, Doctor, as I recall it, that there had been some thirty-five bills introduced and that

you did appear as a witness before various committees as to some of that proposed legislation.

The Witness: May I make a statement on that, your honor?

The Court: Yes.

A. I spoke of, I think, three particular bills which had been introduced into Congress and as to which there were two hearings before the subcommittee of the Senate on Interstate Commerce, and one rather extended hearing before the House Committee on Interstate Commerce and Foreign Commerce. All three of those bills were train-limit bills, that is in the sense that they would, if enacted have put a definite limit on freight and passenger trains, or in one case on freight trains, in the United States. [fol. 472] There was no reference to the Interstate Commerce Commission, which, I take it, is what you referred to. I further testified that in thirty-five states there have been over the past seventeen years some 144 bills introduced, designed to limit the length of freight and/or passenger trains, and that none of these bills, with the three exceptions which I explained, were enacted.

Mr. Strouss:

Q. How long have you been with the Bureau of Railways?

A. I became its statistician in May, 1911. I have been with the Bureau since that date, but have been its director since 1920.

Q. And during that period will you just describe again what your work has been just in a general way?

A. Well, there are a good many phases to my activities. I don't wish to go into a tremendous amount of detail. I outlined yesterday three principal functions of the Bureau, which I stated were, first, the compilation and publication of statistics dealing with the business and operation of the railroads; second, the maintenance of an extensive library on transportation subjects. And I might say that we have built up in that Bureau the largest and most extensive transportation library in the world; and third; a study by the Bureau staff of all kinds of developments of importance in the field of transportation. That is a pretty broad statement, of course, and could be enlarged at considerable length.

Q. A big part of the work is devoted to a study and analysis of records and compilation made from such analysis?

A. Yes, sir, we have a statistical division within the Bureau, yes, which devotes its entire time to just that sort of thing. However, it is only a part of the Bureau's work.

Q. The information which is the basis of your testimony, Doctor, is information which is taken from records, either of the railways or of the Interstate Commerce Commission, isn't that true?

A. Principally so, yes. Of course, there are a great many other records, official and otherwise, from which information is derived, publications of other departments of the Government, for example, state reports, the reports of state legislatures, and state public utility commissions, tax commissions and so on, through many lines—highway commissions and other public bodies.

Q. And to make it more general, then, your testimony [fol. 474] is based on information taken from reports of that character?

A. That, and any other source from which transportation material may be derived.

Mr. Strouss: I think that is all.

The Court: Any re-direct interrogation?

Mr. Mason: Yes, there is some re-direct, your honor.

Re-direct examination.

By Mr. Mason:

Q. Dr. Parmelee, in your cross examination reference was made to the fact that certain of the reports upon which your exhibits are based, covers not only Class I line carriers but also certain switching and terminal companies.

A. Yes, sir.

Q. I will ask you whether or not your statistics insofar as they are taken from such reports, including switching and terminal companies, apply particularly to road freight service? Or perhaps I should reframe the question. Insofar as they apply to road freight service and to operating and to freight transportation expenses, do they include anything relating to these switching and terminal companies which do not engage in road service?

A. The only Commission publication which includes [fol. 475] switching and terminal companies, so far as my exhibits are concerned, is the one dealing with fuel and power.

Q. That is OSE report, is it?

A. Yes.

Q. And that enters into only one of the items which is shown by me in line 10 of my Exhibit 22, "Gross Ton-Miles per Ton of Fuel." Switching and terminal companies are not involved in any of the other statistics in any of the other exhibits.

Q. I will ask you to refer to Exhibits 20 and 21. As I recall, some questions were addressed to you in respect — 1922, one of the years shown on that exhibit, from the standpoint of some unusual or extraordinary condition, such as a strike in the coal fields or a strike on the railroads having had some disturbing effect upon the operations for that year. Do Exhibits 20 and 21 contain any comparison, the tendency of which is to remove any such disturbing effect if it be present?

A. Yes, both the exhibits, at the foot of each exhibit, show a comparison on a four-year basis. That is, they make a comparison between the annual average of the first four years of the period covered by the exhibit, and the annual average of the last four years covered by the exhibit. [fol. 476] And those are averaged and the percentage of change between those two periods is shown on the last line of each exhibit. By taking the four-year period, any unusual circumstances which might have occurred in any one year tend to be evened out and balanced up. That applies to both ends of the period, of course.

Q. In connection with Exhibit No. 20 or possibly one of the other exhibits—I believe it was exhibit No. 19—no, it was not that exhibit—Exhibit No. 15, I believe, some suggestion was made in your cross examination as to the disturbing effect in a supposed strike in the coal fields in 1922 upon fuel prices and the consequent effect upon costs.

A. I think it was Exhibit 20 you are speaking of.

Q. Exhibit 20, perhaps it was, and it would also apply to Exhibit 21. Have you any information as to the relative volume of coal handled in carloads in the year 1922 compared with the year 1939?

A. Yes, the total number of carloads of coal, both anthracite and bituminous, originated in the year 1922 was 7,383,715. In the year 1939 the total number was 6,264,761. In [fol. 477] other words, there was a decline between 1922 and 1939 of more than one million of carloads of coal originated on the railroads.

Q. What is the source of those figures?

A. Those figures are from the car service division of the Association of American Railroads.

Q. Some suggestion was also made, I think as to maintenance expenses, and again reference was had to the possible disturbing effect of a shopmen's strike in 1922, if such a strike took place.

—Now, have you any figures to show the ratio of maintenance expense for the class I railroads compared to the amount of revenue earned for the years 1922 and 1939?

A. Yes, a quite common measure of yardstick of maintenance which is used by the railroads is the so-called the maintenance of equipment ratio, which is the ratio on a percentage basis of the expenditures for maintenance to the total operating revenues received. In the year 1922 the maintenance of equipment ratio which would have been particularly affected by the shopmen's strike was 22.6%. That means that out of every dollar of revenue received by the railways during that year 22.6 cents were spent for maintenance of equipment. In the year 1939 that maintenance of equipment ratio had declined to 19.2%. That is, there was a decline from 22.6% to 19.2% as between the two years. There was similar decline in the maintenance of way ratio, although that is not so closely related to the shopmen's strike, but has a bearing on that whole question of maintenance. The decline in the maintenance of way ratio was from 13.1% in 1922 to 11.7% in 1939. On adding the two maintenance ratios together, the decline in the total maintenance ratio was from 35.7% in 1922 to 30.9% in 1939.

Q. Reference was made, I think, in connection with Exhibit 17 and 18 to the trend of the wage cost as having a bearing upon the expense, the operating expense, shown on Exhibits 20 and 21, and I believe mention was made of the costs of materials and supplies in connection with

the wage costs. Have you any information as to the trend of the costs of materials and supplies, as well as wages, during the period shown on Exhibits 17 and 18?

A. The trend of wages in terms of average earnings per hour as between 1922 and 1939 can easily be computed from Exhibit No. 17. The increase from 1922 to 1939 was 22.3%. As to material prices we have no exact index for the year 1922 of the materials and fuels purchased for railways. We do maintain such an index at the present time, but it was not in effect in 1922, and any statement as to the trend from 1922 to 1939 must be based on somewhat generalized figures. We know—

Mr. Strouss: Wait a minute, Doctor. I don't remember interrogating this witness as to the trend of prices on fuel or supplies. The only question I asked with respect to fuel was whether or not those items were included under the general terms of the—

Mr. Mason: Operating expenses.

Mr. Strouss: Operating expenses, in order to find out what was in that item. I was not asking about any trend.

Mr. Mason: I think you went further than that, Mr. Strouss, and if your honor please, I think there was also some suggestion that because of the conditions in 1922 fuel prices may have been higher in that year.

Mr. Strouss: I asked about coal in that particular year, relating it to the question of whether there was not a coal strike in that year, but I asked no general question as to the trend of fuel prices.

The Court: No, I don't recall that you did. I will sustain the objection to it.

[fol. 480] Mr. Mason: I think that is all. Thank you, Doctor Parmelee.

Mr. Strouss: That is all.

Mr. Mason: Will you take the witness stand now, Mr. Young?

C. R. Young, called as a witness on behalf of the defendant, having first been duly sworn, was examined and testified as follows:

Direct examination.

By Mr. Mason:

Q. Please state your name and official position to the reporter, Mr. Young.

A. C. R. Young; Manager of Personnel, Illinois Central System.

Q. How long have you been Manager of Personnel of the Illinois Central?

A. Since 1935, October.

Q. And what position did you occupy immediately prior to becoming Manager of Personnel?

A. Superintendent of Transportation. I occupied that position, if it may be called a position, since 1926.

Q. Or for a period of nine years?

A. Yes, sir.

[fol. 481] Q. How long have you been in railroad service with the Illinois Central?

A. Approximately 35 years.

Q. In what capacity have you worked?

A. A train baggage man, express messenger, clerk in the chief dispatcher's office and other offices, car distributor and division chief clerk; switchman and yard master, train master, division superintendent, superintendent of transportation; and my present assignment.

Q. Will you state generally what are your duties in your present assignment?

A. I have supervision over the relations between the employees and the railroad, and in my work it is my job to undertake to prevent injuries to employees and accidents of all kinds on the property, to analyze accidents and accident reports for the purpose of developing causes and supplying the remedies if they may be supplied; to travel over the property in general, inspecting yards, engine houses, train dispatchers' offices, train sheets and any other work that may be assigned to me; also to analyze the effective restrictive orders that might handicap or interfere with the operation of the property.

Q. Now, as Superintendent of Transportation, what [fol. 482] were were your general duties?

A. Generally, about the same duties that were described by Mr. Kirk, who preceded me on the witness stand.

Q. Those then include the supervision of the scheduling of the freight and passenger trains?

A. Yes.

Q. Does it include supervision over the operating rules?

A. Yes.

Q. And I take it that as Manager of Personnel, you are likewise directly concerned with the operating rules governing employees?

A. Yes, and during the time I was Superintendent of Transportation I was a member of the Committee on Operating Rules and in my present work I have been a member of the Committee on Train Accidents of the Association of American Railroads, and was Chairman of the Committee on Train Service Accidents and named as a member of the Committee of Uniform Accident Reports of the Association of American Railways.

Q. As a member of those committees did you and have you cooperated with representatives of other carriers for the purpose of furthering the common interest? . . .

[fol. 483] - A. Yes.

Q. As Superintendent of Transportation did you have anything to do with the details of the assignment of locomotives?

A. Yes, I did assign the locomotives.

Q. Did you have anything to do with the details of assignment of freight and passenger cars, or distribution of cars?

A. Yes.

Q. Does the work of Superintendent of Transportation include any supervision of the work in the yards?

A. Yes.

Q. Did you in your official assignment as Superintendent of Transportation travel over the System in freight trains as well as in passenger trains?

A. I did, and I still travel over the system on freight trains as well as passenger trains, sometimes with an office car and sometimes without.

Q. Do you sometimes occupy the caboose?

A. Yes.

Q. With the others who are traveling on the train?

A. Yes, sir, sometimes I ride the engine.

[fol. 484] Q. Do you recall the Nevada Train Limit case?

A. Yes, sir.

Q. Did you testify in that case?

A. I did.

Q. At that time were you superintendent of transportation?

A. I was.

The Court: What year was that case heard?

Mr. Mason: That case was heard in 1935 and extending into the spring of 1936.

The Witness: I testified in September, 1935.

Mr. Mason:

Q. Did you in 1935 make any study of the extent of long train operation on the Illinois Central for the purposes of the Nevada case?

A. I did.

Q. Have you made any such study of the extent of long train operation on the Illinois Central for the purposes of the present case?

A. Yes, I have.

Mr. Strouss: The objection which was made to the testimony of the previous witnesses will go to this testimony also.

The Court: May I remind defense counsel that the court is expecting to be shown a similarity of operations?

[fol. 485] Mr. Mason: Yes I have that in mind and each witness will be questioned within his qualifications as to operations on his railroad with a view to assimilating those operations to the Southern Pacific Company both in Arizona and generally.

Mr. Strouss: Of course the objection goes to the other grounds as well.

The Court: I understand, Mr. Strouss.

Mr. Mason:

Q. Has your observation of long train operation or train operation on the Illinois Central undertaken in 1935 as you have described extended through the intervening years to 1940?

A. Yes, not in as much detail as at that particular time but I still check the operation and ride the trains and make personal observations.

Q. Have you before you, Mr. Young, a document of one sheet which is in effect an outline map of the Illinois Central Railroad?

A. Yes, sir, I have.

Mr. Mason: May we have the map marked as defendant's exhibit No. 27?

The Clerk: Defendant's exhibit No. 27 for identification.

Mr. Mason:

Q. I take it that this exhibit was prepared from more detailed maps of the system supplied by you?

[fol. 486] A. Yes, sir, this is what might be termed an outline map.

Q. Is it an accurate representation as such of the extent of the operations of the system and the states within which it operates?

A. Yes, it is.

Mr. Mason: We ask that the exhibit be received as No. 27.

The Court: Is there any objection to that, Mr. Strouss?

Mr. Strouss: Yes, my objection, of course, is the same to the exhibit and the oral testimony.

Mr. Mason: I wonder if there are any further and more specific objections. I understand that the general objection goes to this?

Mr. Strouss: My objection is specific I think, it was made at the beginning of the case, that it is incompetent, irrelevant, and immaterial and for the reason it is not the best evidence and that there is no showing of similarity and it calls for a conclusion of the witness.

The Court: The objection is overruled. It may be received in evidence.

(The document referred to was received in evidence and marked defendant's exhibit No. 27.)

Mr. Mason:

Q. Mr. Young, I take it in your present position you are [fol. 487] an officer of the entire system represented on exhibit No. 27?

A. I am.

Q. And have system-wide jurisdiction?

A. That is correct.

Q. In that capacity do you receive reports covering the entire system's operations?

A. I do.

Q. What do those reports consist of generally speaking?

A. They consist of a report of the movement both of freight and passenger trains; copies of the various operating reports; reports covering the operations of the yards; all accident reports, both train, train service, and personal injury reports and such other reports as are generally made to a whole line officer.

Q. Do these regularly come to you daily, periodically or otherwise in the course of and as a part of the position that you occupy?

A. They do.

Q. And for the purposes of your position?

A. They do.

Q. What is the approximate mileage of the Illinois Central?

A. Six thousand, six hundred.

[fol. 488] Q. In how many states and in what states does it operate?

A. Fourteen states are traversed by the Illinois Central as shown on the map here. Do you care to have the states named?

Q. The principal states as I view the map and excluding states where you have comparatively little mileage are Iowa, Illinois, Kentucky, Tennessee, Mississippi, Louisiana, and Alabama, are they not?

A. That is correct.

Q. You also have branches of some extent extending into Indiana and Louisiana?

A. Yes, sir.

Q. What is the nature of the traffic generally speaking, is it devoted to one particular class of commodities or products or is it diversified?

A. It is rather generally diversified. The traffic consists of products of mines which is probably the heaviest volume; the products of agriculture, including livestock and

perishables; fruit, manufactured products; petroleum and its products and other miscellaneous traffic.

Q. Do you handle any substantial volume of perishable traffic originating in the Gulf states and moving to Northern destinations?

A. By the Gulf states you have reference to Texas, the [fol. 489] fruit belt in Texas?

Q. Texas, Louisiana, Mississippi, or Alabama.

A. Yes, the Illinois Central originates quite a volume of fruit and vegetables in Louisiana and south Mississippi. It receives a considerable volume of perishables through Shreveport which originates in the Southwest.

Q. As to that it serves as an intermediate or delivering carrier?

A. Yes, and it originates a considerable volume of banana traffic through the port of New Orleans.

Q. Do you serve as a bridge or intermediate carrier or to some extent as a delivering carrier upon perishable traffic moving transcontinentally from the Pacific Coast and Mountain states points of origin?

A. We do, we participate in the movement of those commodities through Omaha and Council Bluffs and then we participate in the movement of Florida fruit and vegetables through Birmingham which is shown on the map and also through Martin, which is not shown on the map but which is located a short distance south of Fulton, Tennessee, which is a junction point with the N. C. and St. L. Ry., Nashville Chattanooga & St. Louis.

Q. Does your line consist of double track or single track [fol. 490] or partly of each?

A. Generally speaking the line which extends from Chicago to New Orleans, that is the north and south line, is double-tracked with some exceptions. The double track extends unbroken to Memphis, Tennessee. Then from there the passenger trains are operated over the line which diverges from Memphis, on the map then it is a lighter line, while the freight traffic moves down through Gwin, Mississippi. From Jackson, Mississippi, which is at the point on the map where the three lines just above McComb, Mississippi, are indicated the main line is double-tracked thence to New Orleans.

Q. Is the line from Chicago to the Missouri River gateways, Sioux City, Omaha and Council Bluffs, is that double track or single track?

A. That is all single track.

Q. Do you maintain make-up and break-up yards at important terminals on your system?

A. The principal make-up and break-up yard is at Markham, Illinois, that is 20 miles south of Chicago within the Chicago switching district. That is a double direction hump, a very modern yard, constructed or completed about 1926 at a cost of about twelve million dollars. We have another principal make-up and break-up yard at East St. [fol. 491] Louis, which is shown on the map, that is adjacent to the Mississippi River and another principal make-up and break-up yard at Nonconah, shown on the map, adjacent to Memphis and within the switching district of Memphis, Tennessee. We have other smaller yards which are not as modern as those three there.

Q. Upon what districts do you handle your heaviest traffic?

A. The heaviest movement is on the north and south line between Chicago and New Orleans.

Q. That is the so-called "Mississippi Valley line"?

A. Yes, that is the line that traverses the Mississippi Valley generally and is the territory in which the fruit and vegetables are originated in south Mississippi and north Louisiana, the coal in southern Illinois and in western Kentucky, which is shown on the line on the map extending from very near Fulton, Kentucky, but in the direction of Louisville, Kentucky. The manufactured products which originate on the line and come generally from Chicago, Indianapolis, East St. Louis and St. Louis and steel products from Birmingham as well as the steel mill territory adjacent to Chicago in addition to which the Eastern connections deliver [fol. 492] manufactured products to the Illinois Central at its junctions at Chicago, St. Louis, Indianapolis and Louisville.

Q. Does the line between Chicago and New Orleans have any severe grades encountered in the freight movement?

A. There is one rather heavy grade on the freight line which I described and which is shown by the heavy line between Gwin and Memphis, Tennessee. The ruling grade there which is located south of Memphis, Tennessee, at Lake View, Mississippi, is 1.5. That is the heaviest grade that is encountered between New Orleans and Chicago on the general route of the through traffic.

Q. Otherwise what is the maximum or ruling grade rather in the district?

A. Five-tenths of one per cent. We have some grades in the other territories that run as high as two per cent.

Q. Will you state the ruling grade on the line between the Missouri River crossings and Chicago?

A. The maximum grade is 1.4. That is between Waterloo, Iowa, and Freeport, Illinois.

Q. Does the Illinois Central connect with the Southern Pacific?

A. Yes, the Illinois Central connects with the Southern [fol. 493] Pacific at New Orleans and Shreveport, Louisiana.

Q. The Southern Pacific line with which it connects is the one that is sometimes called or known as the "Texas and New Orleans Railroad Company"?

A. That is correct.

Q. Or otherwise as the Southern Pacific lines in Texas and Louisiana?

A. Yes, sir.

Q. Do you maintain schedules for the handling of perishables or other freight?

A. Yes, we are a party to the transcontinental schedules which were described by Mr. Kirk this morning.

Q. Do you handle traffic moving to and from Pacific Coast points on either of your main routes, that is, the routes to Missouri River crossings or to New Orleans, that is handled in connection with other lines on schedule to Pacific Coast points?

A. We do, we receive traffic from the Union Pacific principally at Council Bluffs and Omaha and move that traffic to the Eastern connections at Chicago.

Q. Do you receive traffic originating on the Pacific Coast or in Arizona at your New Orleans gateway?

[fol. 494] A. Very little. We get some traffic originating in that territory through Shreveport. We used to get quite a bit through Shreveport.

Q. Are you familiar with the development of the schedules for perishable and other transcontinental traffic which were referred to in Mr. Kirk's testimony?

A. Yes, I participated in the formulation of many of those schedules during the period from 1926 to 1935 and am still familiar with them.

Q. Did you as superintendent of transportation and do you today receive any reports indicating whether your company is a participant in those schedules has or has not maintained "on time" performance?

A. Yes, I do. We get those reports daily and monthly and the Illinois Central has maintained its perishable schedules considerably better than 90 per cent.

Q. Are you in your position familiar with the so-called "A.A.R. Code of Operating Rules"?

A. I am.

Q. Does the Illinois Central use a code of operating rules?

A. It does, and it uses the A.A.R. code supplemented by some individual rules.

[fol. 495] Q. I think in an earlier portion of your testimony you referred to the handling of bananas on your north and south line. Is there anything peculiar to the handling of bananas by the Illinois Central?

A. Yes, there is.

Q. I wish you would describe your handling of the banana traffic with particular reference to schedules and train units in which handled and any other characteristics of the transportation.

A. The bananas are brought into the port of New Orleans in refrigerated ships and discharged at the banana wharves. The handling of bananas has been developed through the course of years until it is very systematically operated.

Q. I want to ask you at the outset, all of this is based upon your own personal observation and knowledge gained by you in the course of years in the several positions you have occupied?

A. That is true.

Mr. Strouss: I want to add to my objection the objection to this particular testimony that I can't see any relation to testimony as to the banana operation in New Orleans to a determination of the constitutionality of the train limit law in Arizona.

[fol. 496] Mr. Mason: I will state the purpose.

The Court: Let's hear the purpose.

Mr. Mason: The testimony I am satisfied will show that the banana traffic has been and is being handled successfully with "on time" performance on rather exacting schedules in train units substantially longer than 70 cars and over

comparatively long interstate runs, thus demonstrating in our opinion that it is practicable and is a practicable operating feat, if we would like to describe it as such, although it is the ordinary course of business, except in Arizona, to handle perishable and other traffic in trains of more than 70 cars without delaying but rather expediting its arrival, precisely along the lines in the answer to which I directed Your Honor's attention early in the case.

Mr. Strouss: My original objections go to that part of the testimony without any further understanding but we are not having that type of testimony here. We are having a description of the way they are taken off the ships and put on the train in New Orleans.

Mr. Mason: That is only preliminary as to the way they are loaded into the cars.

The Court: We have no ports in Arizona.

[fol. 497] Mr. Mason: We have the station of Yuma though where we bring in a 125-car train and have to break them up into 70-car units. The description that the witness is undertaking is only preliminary.

The Court: I will overrule the objection. We will take a very brief recess.

Thereupon a short recess was taken after which proceedings were resumed as follows:

Mr. Mason:

Q. Mr. Young, I think you had undertaken a preliminary part of the description of how the banana traffic is received and handled at New Orleans and thence northward. Will you proceed with that.

The Court: We are not concerned with the boat end of it, I take it in this case, so get us on to the railroad as quickly as possible.

A. I will, Your Honor. The bananas are delivered to the railroad in lots depending on the size of the boat—I will have to mention the boat again, Your Honor—varying from 60 refrigerator carloads to as high as 125 carloads. The importers of the bananas insist that where it is possible the entire cargo of bananas be kept together. The bananas leave New Orleans unsold, they are generally billed to Fulton, Kentucky, which is shown on the map, some five hundred odd miles north of New Orleans and as the bananas

[fol. 498] are sold the billing and final destination of the individual cars is telegraphed to Fulton, Kentucky, where the way bills are then issued, the complete way bills are then issued and that is the principal reason for the importers wanting to keep the bananas together. The bananas are operated on a schedule of 36 hours on the bananas which are dispatched from New Orleans at such an hour that they may arrive at Chicago between 4 P. M. and 2 A. M.

Mr. Mason:

Q. You speak of 36 hours. Do you mean for the run to Chicago?

A. For the over-all run from New Orleans to Chicago.

Q. What is that distance?

A. That is 920 miles.

Q. How does your 36-hour schedule for bananas compare with passenger train-time?

A. The passenger train time is eighteen hours on one train, twenty hours on another, and twenty-one hours on another. On those trains which, based on the schedule of 36 hours, cannot arrive at Chicago between the hours of 2 A. M. and 4 P. M. the carrier is permitted to use additional time so long as it gets the banana train into Chicago to meet the objective between 2 and 4. In other words, the [fol. 499] carrier may add 12 hours to the schedule and fill out the train with other loadings. On the 36-hour-schedule trains we frequently handle from 70 to 75 cars in some instances consisting entirely of bananas. On the schedules to which the 12 hours has been added we load them up around 85 cars. The banana schedules are and must be maintained. They must arrive at Chicago within the time specified in the schedule.

Q. Is that a particular and intermittent service or is that a service regularly performed and of long standing?

A. That is an all year round service. When the bananas originally began to come in through the port of New Orleans the Illinois Central handled practically all of them. Since that time the bananas have been divided up among other railroads, but the Illinois Central is still the primary banana railroad north of New Orleans.

Q. Besides handling bananas in trainload lots as you have described is there any other commodity which you have recently undertaken to handle in trainloads?

A. Yes, in January of this year the Illinois Central in an effort to recover some of the business which it had lost to the inland waterways, which have no restriction on [fol. 500] the length of its tows, nor its tonnage, applied to the Interstate Commerce Commission for permission to publish a 14-cent rate from Chicago to Peoria.

Q. From Chicago?

A. From New Orleans to Peoria, Illinois, on black strap molasses. Black strap molasses is used as a basis for the manufacture of industrial alcohol.

Q. Does it move in large quantities?

A. It moves generally from one consignor to one consignee and moves in blocks of 30 to 40 cars.

Q. You spoke of competition on the inland waterways. Do you mean barge line competition on the Mississippi River and its tributaries?

A. Yes.

Q. Paralleling your lines?

A. Yes, the Commercial Solvent Company was considering the movement of all of its black strap by barges and indicated to the railroad that it could afford to move the traffic by rail on a rate of approximately 14 cents. The Commission granted—

Mr. Strouss: It seems to me we are going a long ways afield.

Mr. Mason: I was going to attempt to shorten this.

[fol. 501] Q. Did you publish and apply a rate on black strap molasses in trainload quantities?

A. We did, in January, 1940, publish a 15 cent rate on black strap molasses with a minimum of 38 cars.

Q. Have you since been handling black strap molasses in trainload lots?

A. We have, and I recently had occasion to check the movement of some 14 of those trains and found that the trains varied from around 70 to 124 cars.

Q. Did the I. C. C. issue a decision in connection with the proceedings brought by you to establish this reduced rate on trainload lots?

A. It did.

Q. Is that the decision in "Investigation and Suspension Docket No. 4645"?

A. 4645, yes.

Q. Reported in 235 Interstate Commerce Commission report at Page 485 and following?

A. That is correct.

Q. You spoke of participation in the handling of coal from various coal fields adjacent to your lines. Is that handled in multiple carload lots?

A. Yes, in southern Illinois there are a number of very large coal mines and those mines will pull out at the end [fol. 502] of a day's run from 60 to 120 cars. The Illinois Central uses a central type engine, 2-10-2, and for the sake of economy undertakes to pull out all of the loads which may be pulled by any one mine in one operation. These pulls will run from 60, and I have seen as many as 144 cars pulled out with one engine.

Q. Is that a regular and standard operation in your experience?

A. Not 144 cars; the average would be around 80 to 90 cars.

Q. Do you handle strawberries during the producing season from the Gulf states to the markets in Illinois and adjacent to the lakes?

A. Yes, there is quite a large strawberry producing territory fairly general around Hammond, Louisiana, that is between Macomb, Mississippi, and New Orleans, indicated on the map, and Hammond is at the point where the light line runs off to the left from the heavy black line. Those strawberries start out of the fields in the late evening and are made up or loaded into passenger equipped refrigerator cars and made up into trains of 25 cars each and handled by a passenger engine and run on a schedule of around 65 miles an hour and generally run intact to Mattoon, Illinois, which is shown on the map between Champaign and Centralia and Bluford, it is about 750 miles. At Mattoon those trains are broken up and some of the strawberries move to eastern destinations and the rest into Chicago.

Q. You say that is an express train operation?

A. Yes, it is express traffic moving passenger equipment and on passenger schedules.

Q. Do you handle any of these strawberries in so-called head end or express refrigerator cars on regular passenger trains?

A. A few, but not many. In the beginning of the season and at the close of the season a few move on the regular trains.

Q. Generally speaking what factor or factors determine the length of the freight trains to be operated by the Illinois Central?

A. The primary factor is the volume of traffic available; the secondary factor is the size of the engine and the grade.

Q. In single track territory, that is for example between the Missouri River crossings and Chicago, do siding lengths enter into the situation?

A. I should have mentioned that the siding lengths in single track territory have a considerable bearing.

[fol. 504] Q. Does the Illinois Central have its own refrigerator car equipment?

A. Yes, it owns approximately 2500 refrigerator cars.

Q. Are you familiar with the Pacific Fruit Express Company refrigerator cars?

A. Yes, sir.

Q. Do those operate over the Illinois Central?

A. Yes.

Q. Are your Illinois Central refrigerators similar in general type to the P.F.E. cars?

A. They are; they are all built along the standard of refrigerator car design.

Q. Have you been furnished with copies of defendant's exhibits Nos. 2, 3, 4, 5, and 6?

A. I have.

Q. Have you as superintendent of transportation and in the positions occupied by you prior to your appointment to this position become familiar with the types of freight and passenger car equipment and freight and passenger locomotives owned and operated by the Illinois Central?

A. Yes, I have.

Q. Is that part of the duties of the positions that you have occupied?

A. Yes.

[fol. 505] Q. Commencing with yardman and continuing through division offices to superintendent of transportation?

A. Yes, it was.

Q. I take it as yardman you would have a particularly good opportunity to use the locomotives and the freight cars owned and operated by the company?

A. Yes, I had to live with them and also while I was trainmaster and division superintendent.

Q. You not only had to live with them but now and then you had to ride those locomotives, didn't you?

A. Yes.

Q. In your present position and as superintendent of transportation do you maintain that familiarity?

A. I still do, yes, sir.

Q. Is that part of the duties of your position?

A. Yes.

Q. Now looking at exhibit No. 2, will you say whether, generally speaking and without undertaking to go into detail, the Illinois Central freight boxcar equipment has in connection a parallel improvement such as depicted on the exhibit?

A. Yes, it has in a general way. The improvements [fol. 506] have been made about the same time, the capacity increased in about the same manner as indicated on this exhibit.

Q. Has your company gone to the use of steel or steel underframe freight cars.

A. Yes, a little better than 90 per cent of the boxcar ownership of the Illinois Central is now steel and steel underframe cars.

[fol. 507] Q. Referring to Exhibit No. 4, will you say whether the passenger car and passenger train car equipment of the Illinois Central has undergone improvement through the year substantially along the lines designated by the exhibit?

A. It has. The only improvement which is listed on this exhibit which the Illinois Central has not is the electric luggage elevator on the streamline car shown on the exhibit.

Q. You do have streamline cars similar in general type to those shown in 1937 and 1939?

A. We have one train consisting of articulated cars of streamline design.

Q. Is that a named train?

A. Green Diamond, which operates between Chicago and St. Louis.

Q. Do you now operate in regular passenger service any wooden coaches, or other wooden passenger car equipment?

A. No.

Q. Now, will you refer to Exhibit No. 5, showing the freight locomotives of the Southern Pacific. You have mentioned various types of locomotives used in the past in your operations; do they correspond to those shown on the exhibit?

A. In many instances they do. We do not operate any [fol. 508] of the Consolidation 2-8-0. We are using engines developing 89,500 pounds of tractive effort, which compare with the 43,300 of the Consolidation shown on this exhibit.

Q. That is, apparently you mention larger locomotives than the Consolidation?

A. That is true. That engine has been developed primarily to work in the transfer service in the Chicago terminal. In normal times the movement is very congested and it is necessary to operate rather long and heavy trains.

Q. Do you have any corresponding to the Mikado?

A. Yes. We have various types of Mikado, the smallest type ranging in tractive effort from 54,000 pounds to 69,000 pounds; and then we have another type of the same wheel arrangement which we call the Lima Engine, this was manufactured in Lima, Ohio, which develop 68,850 to 77,578 pounds of tractive effort.

Q. When did you acquire the Mikado type or start to acquiring it?

A. We began acquiring the small type in 1911.

Q. And the larger types you call Lima?

A. That came along about 1924, and we acquired the [fol. 509] small type engine, which is a 2-10-2 wheel arrangement, in 1922. That type engine develops from 79,000 to 85,000 tractive effort. We have none of the Southern Pacific type 4-10-2, nor any of the Articulation Consolidation type. We do, however, have in our yard service at Chicago some Diesel Electric yard engines, which develop around 90,000 to around 120,000 pounds tractive effort.

Q. Are those comparatively recent acquisitions?

A. Yes, they have been put in service within the last two years.

Q. Are any of your locomotives in freight service equipped with boosters as indicated here?

A. Only ten of the entire ownership have been equipped with boosters.

Q. Will you refer to No. 6 and state whether you have had in the past or now have types of passenger locomotives corresponding to those shown on the exhibit?

A. The Illinois Central has some ten-wheel engines still in service corresponding with the second item on the exhibit. It has a Pacific type, the smaller types on the Illinois Central, developing about eleven hundred more pounds [fol. 510] than the other shown on the exhibit. The Pacific type develop about 43,700 pounds, which is about the same as the type shown on the exhibit, and we have the larger Pacific, as well as the Hudson type, developing around 67,907 pounds, and the larger Pacific developing around 73,000 pounds.

Q. Those are the locomotives operating in use in the fast passenger service?

A. Yes. And the Mountain Type, the older mountain type corresponds with that shown on the exhibit. We have some newer Mountain types, which we have constructed in our own shop developing around 73,000 pounds. We have nothing like the Golden State type.

Q. You spoke of the Hudson type locomotive, what is the wheel arrangement of that?

A. 4-6-4.

Q. Are there block signals installed on the Illinois Central?

A. Yes sir. About one-sixth of the main-line miles are equipped with block signals. About eleven hundred miles.

Q. Does that include the main lines between Chicago and New Orleans?

A. Chicago to New Orleans, and from Chicago on the lines West.

[fol. 511] Q. Chicago to St. Louis?

A. Chicago to St. Louis.

Q. Is the installation of these block signals a development of the last several years?

A. The block signals have been installed currently from year to year since around about 1915.

Q. Is that program of installation, is that being continued currently?

A. Not at this time.

Q. What is the standard weight of rails in your main lines?

A. The new rail which is now being placed in the main line is 112-pound section. We have some rail in the heavier traffic density territory weighing 110 pounds, and a still greater proportion of 90-pound sections.

Q. Does the 112-pound now being laid replace lighter rail formerly in the track?

A. Yes, replaces 90-pound rail.

Q. What are the lengths, the typical lengths of the passenger runs of the engines in main-line service?

A. From Chicago to Memphis, which is 528 miles, and Memphis to New Orleans, which is 480 some odd miles.

[fol. 512] Q. It is 911 from Chicago to New Orleans, is that by Memphis?

A. It is 392 miles. My answer should be 528 and 392.

Q. Do I understand then that on a through passenger there is simply the one locomotive change in Memphis?

A. That is true.

Q. The crews don't run that far do they?

A. No, the crews change five times.

Q. That run from Chicago to Memphis involves operation through more than one state, does it not?

A. Yes, that involves operation through Illinois, Kentucky and Tennessee.

Q. And from Memphis to New Orleans involves three different states?

A. Yes, Tennessee, Mississippi, and Louisiana.

Q. The engines run through from Chicago to St. Louis without changing?

A. Yes, that is three hundred and some miles.

Q. Do you operate any through passenger service between Chicago and the Missouri River, toward Omaha?

A. We operate through passenger service between Sioux [fol. 513] City and Chicago, not between Chicago and Council Bluffs.

Q. The distance to these cities is something like 460 miles?

A. Yes.

Q. Is that a single through run?

A. The engines run through, the crews change three times.

Q. And that involves operations in at least two states?

A. Yes.

Q. What are some of your typical lengths of freight engine runs in main line service?

A. From Chicago to Bluford is 250 miles; Bluford to Memphis is 258 miles. From Frogmoor, shown on the map in the lower right-hand section, to Birmingham, Alabama, is 220 miles, and from Gwin, Mississippi, to New Orleans, that is approximately 250 odd miles.

Q. Are those runs for freight locomotives that you have just mentioned in general interstate runs?

A. Generally they are, yes.

Q. I think you have just mentioned in connection with commodities, such as coal, bananas, the special movement of black-strip molasses, and perhaps others, that the trains [fol. 514] in many cases consisted of more than seventy cars, do you operate trains of more than seventy cars in connection with the handling of other types of freight over your main lines?

A. Yes, we generally operate miscellaneous trains containing miscellaneous commodities of over seventy cars.

Q. By that you mean just over seventy cars; or somewhere substantially in excess of that figure?

A. The excess will vary from seventy-five cars up to as high as 140 cars in one instance.

Q. Do you handle perishables, or other freight moving on schedule in trains of those lengths?

A. The trains handling perishables will average from eighty to ninety cars.

Q. Does that include trains handling the perishables received by you at the Missouri crossing and taken into Chicago?

A. Not often, we do not get a sufficient volume of perishables through the Missouri River crossing to make up a train of that dimension.

Q. Your statements as to the lengths of trains operating by you are taken from actual observation or information [fol. 515] reaching you in the regular course of your duties as Superintendent of Transportation previously, and now as Manager of Personnel?

A. Yes, I have seen the reports of the movement of the trains and have ridden some of the trains myself.

Q. That is independent of any special study which you have made for this case, or the Nevada train limit case?

A. That is true.

Q. I believe you testified that the practice prevailing to-day, did it prevail in 1935?

A. Yes.

Q. And has it continued to prevail during the last few years?

A. It has. There are more long trains being operated now than in 1935.

Q. Your company has a considerable extent of branch-line miles, does it not?

A. Yes.

Q. And I take it, performs a considerable gathering or concentrating service, which means all its branch-line operations.

A. That is true.

Q. Do your branch-line trains ordinarily attain or exceed seventy cars in length?

[fol. 516] A. Not often. Occasionally one may exceed seventy cars. Very seldom, because of the absence of traffic.

Q. Do you operate a large number of such branch-line trains of length shorter than seventy cars?

A. Quite a large number. By referring to the map may be seen to be considerable, especially in the territory paralleling the Mississippi River down in the Mississippi valley, and also in the territory of East St. Louis and Centralia.

Q. But the Memphis and New Orleans and that in southern Illinois are territories of considerable production of freight for your railroad?

A. That is true.

Q. Does your company operate trains in main line passenger service which exceed fourteen cars?

A. Yes.

Q. Is your statement likewise based upon your own personal observation, as well as the reports you have mentioned?

A. That is quite true. I ride the passenger trains very frequently, both with an office car and without.

Q. Is the operation of passenger trains exceeding fourteen cars in length on the main lines and freight trains [fol. 517] exceeding seventy cars in length on the main lines a regular, customary and normal practice in your knowledge?

A. Yes.

Q. Have you before you, Mr. Young, a statement in one sheet bearing the title "Illinois Central System, etc.," "Freight operating and freight transportation expenses relating to traffic, calendar years 1922 to 1939, inclusive?"

A. Yes, I have it now.

Q. Did you prepare and assist in the preparation of this statement?

A. I did.

Q. And the sources of the figures shown thereon are indicated on the statement?

A. Yes, sir.

Q. We ask that the statement be marked for identification.

The Clerk: Defendant's Exhibit No. 28, marked for identification.

Mr. Mason:

Q. Have you also before you, Mr. Young, a statement on one sheet bearing the title: "Illinois Central System," and so forth, "Freight service operating averages, calendar years 1922" and so on to 1938 and 1939?

A. I have.

[fol. 518] Q. Did you prepare or assist in the preparation of this statement?

A. Yes, I did.

Q. And the sources from which the figures run are taken are shown on the exhibit?

A. Yes.

Mr. Mason: We ask that the statement just referred to be marked as Defendant's Exhibit No. 29, for identification.

The Clerk: Defendant's Exhibit 29 marked for identification.

Mr. Mason:

Q. Mr. Young, have you before you a statement on one sheet bearing the title, "Illinois Central System, Typical example of through freight trains handled between certain terminals, April 16th-19th, inclusive, 1939"?

A. I have.

Mr. Mason: We ask that the statement just referred to be marked as Defendant's Exhibit No. 30 for identification.

The Clerk: Defendant's Exhibit No. 30, marked for identification.

Mr. Mason:

Q. Did you prepare or assist in the preparation of this exhibit, Mr. Young?

A. I did.

Q. From what sources was the exhibit prepared?

[fol. 519] A. All of the information shown on the exhibit, except that which is captioned "ruling grade," was taken from the train dispatchers train sheets, which is a running record of every train movement during a twenty-four-hour period, and that is the base record of practically all railroad operating reports.

Q. Now the figures of "ruling grade" from what source are they taken?

A. They are taken from the profiles which are maintained in the office of the Chief Engineer of the property, and which are furnished to all officers of the railroad. That is, the percentage of the ruling grade is taken from that source.

Q. Are you familiar with the physical characteristics of the system generally?

A. Yes, sir.

Q. Do these figures of ruling grade, which are shown on these exhibits, correspond with your knowledge otherwise obtained with the grades that prevail in these several portions of the system heretofore shown?

A. Yes they do. I have ridden test trains developing engine rating in a number of territories, and the tests were run over these particular grades in order to develop the [fol. 520] proper tonnage rating for the locomotives in service in that territory. I did that both while I was train master, and also as Superintendent of Transportation.

Q. Is it necessary for the Superintendent of transportation to know the physical characteristics of the line?

A. Yes.

Q. For what purpose?

A. So that he may check the proper rating on locomotives to determine that the proper locomotive is being

used in the proper territory, and check against that the performance of the individual trains.

Q. Have you checked the information under the column "ruling grades" against the profiles, as well as your own personal knowledge?

A. Yes.

Q. And is that information true and correct?

A. It is.

Q. Did you, for the purposes of this exhibit, gather together the dispatchers' train sheets for the ten-day period indicated by the title?

A. Yes, I had the train sheets sent into my office from the various chief train dispatchers' offices and compiled this information from that.

Q. How many office train sheets were there?

[fol. 521] A. About ninety.

Q. Will you describe a typical train sheet? Is it a long and bulky sheet?

A. Yes, depending entirely upon the number of trains which are normally operated in the operating district covered by the train sheet. Some of those sheets are five feet in length and the shorter ones will be probably three feet or four feet in length. Then they are about $2\frac{1}{2}$ feet wide. That is rather the standard width.

Q. These ninety separate train sheets made a rather bulky group of documents?

A. Yes, quite a large volume of them.

Q. Did you go through each of those for the purpose of preparing this showing?

A. I did. I either called off the figures to those who were assisting me, or they called them to me.

Q. Did you subsequently check back?

A. We checked them after we had them set up on the master of the exhibit.

Q. I will ask you if the train sheets are maintained as permanent records of the company for at least a definite period of years?

A. Yes, they are maintained in the chief dispatchers' offices, each month's sheets, that would be thirty or thirty [fol. 522] one, as the case may be, are bound together and filed by months.

Q. Then the train sheets for the ten days during the month of April, 1939, for each of the districts covered here

would be bound, and the documents used by you in compiling this exhibit being from April 10th to 19th, would have to be taken from that bound volume?

A. That is true.

Q. Did you determine whether the information here shown is correct according to the original sources from which it is taken?

A. To the best of my knowledge and belief it is.

Q. There are certain computations, as I check the exhibit, which appear in the block at the bottom, did you make those computations?

A. I did not make them, but I have checked them with that which appears above, and find it is correct.

Q. Why did you select a period of ten days such as were shown here?

A. The ten-day period in April was selected because April is an average month. It is neither a high month nor a low month, but it is typical of an average overall year performance.

[fol. 523] Q. Are these ten days, according to your knowledge and information, reasonably representative of a corresponding proportion of the year's business and operations?

A. I think it is.

Mr. Mason: I am about to offer the exhibit in evidence. Mr. Strouss, you may question if you wish.

Mr. Strouss: I would just as soon let it go until in the morning, my eyes are bothering me.

The Court: The Court will be at recess until 10:00 o'clock in the morning.

[fol. 524] November 28, 1940. 10:00 A. M.

All parties being present as heretofore noted, proceedings were resumed as follows:

The Court: You may proceed, gentlemen.

C. R. Young, a witness on behalf of the defendant, resumed the stand and testified further as follows:

Mr. Mason: I think that at the conclusion of the proceedings yesterday I had about completed the testimony intended to lay a foundation for the introduction of the state-

ment marked Defendant's Exhibit 30 and had indicated to Mr. Strouss that I was about to offer the exhibit subject to any prior questioning of his own.

Mr. Strouss:

Q. Mr. Young, the columns marked 1 and 2, are those division terminals?

A. No, they are crew operating districts.

Q. Is the train between Chicago, and Champaign, is that counted as one point?

A. Yes.

Q. And the same is true of each of the other points down through the column?

A. That is true.

Mr. Strouss: I think that is all the questions I have. [fol. 525] Mr. Mason: We offer the exhibit as Defendant's Exhibit No. 30 in evidence.

The Court: The record may show the same objections to the introduction of this exhibit as to the other exhibits, and the court at this time is overruling the objection.

The Clerk: Defendant's Exhibit 30 in evidence.

The Court: Before the day is through, I do have some remarks to make with reference to this particular type of exhibit. I have been reading your cases, Mr. Strouss, and I might possibly say to counsel in fairness at this time, both counsel for the defendant and the state, that due to the importance of this case, the fact that you gentlemen are veterans, so to speak, in this type of litigation, the court has wanted to proceed cautiously and not be making any snap rulings on the admission of evidence, particularly, the rejection of evidence that was offered, and I have been leaning backwards in an endeavor to give the defendants a full opportunity to introduce the evidence supporting their theory of the case. However, it seems to the court that the train limit law is no different than any other, this law suit is no different than any other suit; that is, I know of no rule that makes an exception in the matter of the admission of evidence, [fol. 526] the admission or rejection of evidence in such a case. Really, I think there can be no question but what where voluminous books and records are concerned that experts and accountants, or others who are familiar with them, may make an examination of those records and then testify as to what those books contain. But I haven't

found any law, gentlemen, to support the proposition that such testimony can be admitted without those books and records being available to opposing counsel, and while I am admitting these, I probably won't have time before the weekend to completely satisfy myself as to the law governing the case, I think I should at this time tell you that there is a very serious doubt in my mind as to the admissibility of such exhibits as the one you are now referring to without the production of the underlying records.

Mr. Mason: May it please the Court, we have been through the trial of two train limit cases.

The Court: Realizing that, that is the reason I have been reluctant to make any snap rulings.

Mr. Mason: One in this state and the other in the State of Nevada, and both, of course, in the Federal Court. I do not understand, however, that the rules of evidence are in any respect different in the Federal Court than they would [fol. 527] be in this case. In those cases—perhaps I had better refer to the Nevada case because I did not participate in the Arizona case and Mr. Strouss did, as also did Mr. Booth—but in the Nevada case, at least, we presented testimony of the same type as Exhibit 30 prepared by the witnesses from the several railroads and testified to by them as having been prepared and taken from the dispatcher's train sheets and other documents necessarily consulted. In that connection, I might say that these dispatcher's train sheets are extremely voluminous documents and contain a great amount of data and information pertaining to the operation of railroads, which is not involved here.

The Court: There is no question but this is a concise way of presenting it and it would be more expeditious. There is no question about that.

Mr. Mason: The point I am getting to is this: they must be brought here from several points and from a considerable distance in the case of the Illinois Central and also in the case of the New York Central.

The Court: The court fully appreciates the difficulty.

Mr. Mason: To get to the point a little more definitely, [fol. 528] in the other cases while objection was made on the ground of relevancy—the same objection that Mr. Strouss has made,—that objection was disposed of, of course, by reference to the allegations of the complaint.

The Court: I might say to you, I am not concerned or in doubt as to the question of its relevancy.

Mr. Mason: I did not intend to discuss that question, except to point out that that objection was made, and the objection of competency, if it was made—and I don't recall that it was made—was not seriously urged after it was pointed out that the documents were extremely voluminous, that to bring them for a great distance would be a great inconvenience, and that the witness would say under oath that he was familiar with the details and that he had made a personal examination of the original data. When we undertook our preparation of this case, we proceeded upon substantially the same basis; that is, to have the witness personally present who was qualified to testify as to having made the examination of these voluminous documents located at a distance; and for that reason we have not up to this time arranged for the production of the train sheets and profiles which would furnish the underlying basis for an exhibit such as Number 30.

[fol. 529] If subsequent exhibits are offered, and we have prepared certain exhibits along the same lines or have had them prepared by the officials of other railroads, we shall endeavor to have the train sheets here regardless of expense and trouble in bringing them. It is only in the case of Mr. Wright, Mr. Kirk and Mr. Young, who were the first three witnesses of this type called, and as to which we did not anticipate the necessity of having the train sheets, that we are unable to produce them at this time. If we may be indulged to that extent, we will undertake to have those train sheets here, and if it be necessary to recall the witnesses after Mr. Strouss has examined those train sheets, we can possibly do that.

The Court: Counsel indicated in those previous cases that the objection which Mr. Strouss is insisting upon was not made, or if made, was not insisted upon.

Mr. Mason: It was made and an exception taken, but the master—

The Court: Was that before a master.

Mr. Mason: It was before a master appointed by the federal court, but with full authority and authority to rule upon evidence; and many exhibits which we offered were [fol. 530] rejected, of course, and they weren't considered; they weren't a part of the record at all; they were separately submitted. I say "many", not so many exhibits offered by the Attorney General were rejected; in fact, I think very few.

The Court: I am not at all certain that possibly Doctor Parmelee does not stand in a class by himself. You produced here the original records in that instance.

Mr. Mason: We produced all of the underlying records there.

The Court: From which his testimony was taken, and I realize that you gentlemen have produced here already in this court men who are outstanding in the field, who have had wide experience, who, without reference to any books or records can give a lot of testimony that is entirely competent and relevant, and it is not that which the court is concerned about. But when you get into an exhibit such as this which you are offering here, if counsel insist,—they have, vigorously insisted upon objecting to it—they have been very patient about it—that they are entitled to examine those original exhibits, gentlemen, I think they are entitled to those, as a matter of law.

Mr. Strauss: Of course, one thing that might be said [fol. 531] about this exhibit, while it has been stated by counsel as to the number of train sheets in a day, and it only purports to cover a period of ten days, as a matter of fact, it refers to a period of a year and adopts it, takes this as a typical example of train operations during the year, so that in order to examine him upon that question it would require the records for the whole year.

Mr. Mason: I think the witness being fully qualified as he is, I think that is carrying the objection a little far.

The Court: I am not going to go into details, gentlemen. I just want to tell you how the Court feels about it. I have tried to proceed cautiously and I don't want to make some snap rulings that would work an injustice or be unfair; but I am of the opinion—and you haven't shown me any law to the contrary, gentlemen—that if counsel insists upon it for the purposes of cross-examination he is entitled to those original records. He may have difficulty when he gets them, but that is his problem.

Mr. Booth: There is just one matter I would ask your Honor to take into consideration. In examining the authorities, there are many classes of records kept by railroad companies. Some of them are prescribed by the Interstate Commerce Commission, and some of them are records below the grade, or below the making of the Interstate Commerce Commission records in point of time. Now

the dispatcher's train sheet is on a form, as we shall show later, prescribed by the Interstate Commerce Commission. There can be no doubt but that that is an original record of the performance of trains on a district for the period covered by the sheet. So that when a dispatcher's train sheet is produced the person producing it is producing an original record of the transaction so far as any record is made. Now when we come to the number of miles, the number of cars in a train, the weight of cars and the point where the train was set out, the cars were set out, there is another class of records that stand on an entirely different basis. The conductor makes certain records. By the time those records get into the accounting department of the company there may be entries on those made at terminals by other employees; there may be computations placed upon them by still other employees, and finally when a single sheet—we can show all this by testimony—I am simply mentioning this [fol. 533] so that the situation may be in view when you read the authorities—when finally a single sheet gets into the records and the dispatcher makes up his record of the number of train miles, the number of car miles and the number of pieces of freight—multitudinous pieces of information that are accumulated as to that division, the original entry passes out. Indeed, in most cases it isn't even preserved. It goes onto the records of the company in the accounting department office in a summarized form, and then from that summarized form is still or may be further summarized. So the whole thing is finally accumulated in a report to the Interstate Commerce Commission in such form as that Commission may prescribe.

We all know that this rule for the production of records originated largely in the matter of books of account of merchants, and originally a merchant—I remember even in my own experience as a practicing lawyer the merchant's books of account consisted of a day book on which sales and receipts of money were entered currently, and that was known as the book of original entry. You may find that expression throughout all these older decisions. From there it was transferred to a ledger, and the thing you had [fol. 534] to do in order to prove an account against an original debtor, was to produce your book of original entry. You had to produce that book. And then gradually as the accounting system became more systemized you had the sales slip, and of course, the sales slip is the original entry

of the transaction between the merchant and the customer; and these sales slips are carried forward either to permanent books or cards of some kind which correspond to the day book, and then further onto to other cards which correspond to the old ledger. But in my examination of the authorities I have not found any case where you have to produce the original sales slips of a merchant.

Now, as another suggestion, and an almost impossible thing, in proving railroad records, such as car miles, train miles and character of commodities handled, is the bulk document situation. There are millions of what would correspond to the merchant's sales slips in the course of a year in the conduct of a railroad, such as any of these railroads whose witnesses have testified here, or any of the railroads we will call. Of course, it would be impossible for defense counsel to examine those within any reasonable time, any reasonable length of time, or even an expert accountant, — an examination of the cards and the sales slips of a railroad made out currently by station agents, by conductors, and so on. In the nature of things, even the Interstate Commerce Commission examiners, who are authorized by statute to examine our books, never have examined things of that kind. They examine consolidated summarized entries in the accounting department.

I mention this because sooner or later in this case the matter is going to come up, and if a case of this kind is going to be tried, as the saying is, like a murder case, if we have to get down to the original sales slips, it could be done, but it would take ten years to try even the Southern Pacific end of this case.

The Court: I assure you this court is not going to be here ten years.

Mr. Booth: I respectfully ask your Honor to have—

The Court: The court is not going to carry this to any absurd extremes. You can rest assured of that. But it seems to me that there are certain basic records from which this data is taken, and that opposing counsel is entitled to them.

Mr. Booth: This particular exhibit, the original basic record from which it was taken, is the train sheet, that contains everything but the ruling grade on the district, a matter which every freight conductor and every freight engineer knows on that district—every operating man knows what the ruling grade on the district is.

The Court: I will say that the Court is of the opinion that these witnesses of the type you have been producing here, where they know of their own knowledge certain things; the Court is going to permit them to testify to it. The mere fact that that same data may be of record in some book of account, or some book of the railroad, I don't consider in those cases you necessarily have to produce the records. But you take—I marked some of them yesterday—let me give you another one as an illustration. Take Exhibit 11, for instance. That is typical of some of these exhibits. There is a detailed exhibit of the New York Central Railroad Company, which is taken, according to the statement there, from the annual reports of the Interstate Commerce Commission. Now without the production of even the original reports, or a copy of the reports, or the books or records from which it is taken, you offered it in evidence and the Court admitted this exhibit which goes into detail as to the operating of the railroad, their revenue ton miles [fol. 537] and freight operating expenses, and there isn't a thing to support it so far as any original records are concerned. If counsel wants to go back to that on cross examination his hands are tied, he can't do a thing.

Mr. Mason: I will say to the court frankly we are arranging, or insofar as we can, to have either accounting witnesses or persons who are thoroughly familiar with accounting bring these annual reports in the form of OSA and OSE here and have them in the court room, and I wish counsel much joy in examining them.

As far as individual personal observation is concerned, why, as Mr. Boyle observed to me the other evening, the Mexican section foreman or a Mexican section hand down here at Picacho is competent to testify as to the character and length of trains that he sees passing on the section, and certainly a railroad official, a man with authority, who has had years of experience, is competent to testify without the aid of any train sheets about the general condition of the railroad.

The Court: You gentlemen don't want to prolong this. You don't want to shorten it up any more than I do. I assure you I would like to have this matter move along just as [fol. 538] expeditiously as possible, and not drag along. But on the other hand, counsel is entitled to certain rights here, and the court must deal fairly, of course.

Mr. Boyle: I, like your Honor, may not be a veteran in this case, but it has been very interesting to me, thus far and it is something new that we are not entirely familiar with, and I want to be clear—and I think perhaps because of the observation made by you a moment ago I am clear on this point—witnesses like Mr. Wright, Mr. Kirk, Mr. Yeung here have given a great deal of testimony with which they are entirely familiar growing out of their experience and life in railroading. The testimony they give has been based upon their personal observation through all that period of time. I understand that the court's comments this morning have to do merely with the documentary testimony so far as the exhibits are concerned, and all of that other testimony that can be backed up, or was backed up by personal observation and experience is a different thing.

The Court: Within reason, I agree with you, Mr. Boyle. Well, you may proceed.

Mr. Mason: Your Honor, I had this comment upon Number 11, since it was mentioned by the court, that the source, of course, there is the annual report made to the Interstate [fol. 539] Commerce Commission. Now the annual reports to the Interstate Commerce Commission, the originals are on file, of course, in Washington, and perhaps could not be withdrawn, but each company necessarily and as a matter of obligation by virtue of the orders of the Interstate Commerce Commission maintains its own counterpart copies as its own records. I take it that the production of those counterpart copies by the official of the railroad company concerned, who has charge or who has been given charge for the purposes of this case to produce them here would be sufficient to satisfy the requirement.

The Court: I would rather not commit myself, gentlemen, on the details of this. I just wanted to make some general observations. I do think, in fairness to counsel for the defendant, that a definite ruling should be made on this very shortly, and I will be prepared to do that at the beginning of our session next week, and at that time I will entertain a motion to strike certain, such of these exhibits as the court feels were improperly admitted. But as to these other matters I think we had better cross those bridges as we get to them.

Mr. Mason: The production, of course, of the counterpart [fol. 540] originals or retained original copies would satisfy

all of the necessities for cross examination, because the same figures would be there available as if we had the originals from Washington.

The Court: You may proceed.

Mr. Mason:

Q. Now, Mr. Young, as to Exhibit Number 30, are those figures of ruling grade shown for those various districts matters within your own knowledge?

A. Yes.

Q. Is it necessary for you to, or was it necessary for you as superintendent of transportation to know the ruling grades in each of the districts for the purpose of assigning locomotives?

A. That is true.

Q. And you have acquired that knowledge of ruling grades in the course of your duties and as a part of the knowledge necessary to your position as superintendent of transportation?

A. Yes.

Q. Mr. Young, I ask you to refer, if you will, to a statement in one sheet bearing the title, "Illinois Central System" maximum number of cars handled in various main line passenger trains, April 10 to 19 inclusive, 1939."

[fol. 541] Mr. Mason: I will ask that the statement just referred to by title be marked Exhibit 31 for identification.

The Court: Defendant's Exhibit 31 for identification.

Mr. Mason:

Q. Have you Number 31 before you, Mr. Young?

A. I have.

Q. Did you prepare this statement?

A. I did.

Q. From what sources? From what sources was the information therein shown taken?

A. From the train dispatcher's train sheets.

Q. They were made available to you for the purposes of this exhibit?

A. They were.

Q. And those were the dispatcher's train sheets for all of the districts between Chicago, and New Orleans, Chicago and Birmingham, St. Louis and Memphis, and Chicago and Omaha for the ten-day period covered?

A. That is correct.

Q. Now state in round numbers approximately how many dispatcher's train sheets that would be.

A. Approximately ninety train sheets. Those were the same train sheets which were used in the compilation of Ex- [fol. 542] hibit 30, as I remember.

Q. Does this exhibit cover train territories upon which you operate passenger trains, other than the line to St. Louis, that is main line passenger trains?

A. Yes.

Q. And these are examples of main line trains entirely?

A. Main line trains and passenger, the named trains. It does not include the local passenger trains.

Q. Is the period from April 10th to 19th, 1939, fairly typical as regards volume and character of passenger traffic of the year 1939?

A. It is typical of the year around operations. It does not include any of the rush periods which occur around holidays or various seasons. It is just a good average month.

Q. Does the exhibit accurately reflect the information shown in the dispatcher's train sheets from which it was taken?

A. It does.

Q. Has it been checked *it* by you for that purpose?

A. It has.

Q. Now, there are certain computations on the exhibit in [fol. 543] each of the blocks, and again in the separate block at the foot of the exhibit. Did you make or check those computations?

A. I did not make them. I have checked them and they are correct.

Mr. Mason: I am about to offer the exhibit, Mr. Strouss, unless you have some questions.

Mr. Strouss:

Q. This covers the same ten-day period as the freight train exhibit, Exhibit No. 30.

A. That is true.

Mr. Strouss: In addition to the objections which I have, the running objection, so to speak, I have a further objection to this exhibit, that in permitting the witness to select

a particular period based upon his own judgment is taking evidence which is a conclusion of the witness and incompetent.

The Court: I will overrule the objection.

The Clerk: Defendant's exhibit 31 in evidence.

Mr. Mason:

Q. Now, apart from Exhibit No. 31, Mr. Young, and any study which you may have made for the purpose of comparing that exhibit, are you generally familiar with the main line passenger train operations of the Illinois Central? [fol. 544]. A. Yes, I ride them frequently.

Q. Is it necessary in the course of your duty in your present position?

A. Yes, it is.

Q. Has it been necessary in the past?

A. Yes.

Q. Will you state whether or not the Illinois Central from time to time operates passenger trains consisting of more than fourteen cars as well as those consisting of less than fourteen upon its main lines?

A. Yes, it does.

Q. Upon what main lines and in what particular traffic does the operation of such trains of more than fourteen cars most generally take place?

A. Principally in the territory between Chicago and New Orleans, the north and south lines that we commented on yesterday as the heavy traffic lines.

Q. Is that also your principal passenger-carrying line?

A. Yes, it is.

Q. And from your general observation and experience and again apart from any study made for the purposes of this case, would you say approximately how frequently in proportion to the entire number, passenger trains of more than fourteen cars are operated upon your principal [fol. 545] main line that you have described?

A. In the regular passenger trains which operate from day to day, the proportion of the trains which are over fourteen cars, fourteen cars and over, are a little better than 50% of the total.

Q. Do you operate such trains of more than fourteen cars upon regular and continuous schedules and similar to those of trains less than fourteen cars?

A. Yes, where the train contains more than fourteen cars it is operated on the regular schedule which is maintained.

Q. Do I understand, then, that a particular named train bearing a particular number and operated on a particular schedule will on one day, for example, be fourteen cars or less and on the succeeding day more than fourteen cars?

A. That is right.

Q. And operate on the same schedule?

A. Yes, the point that I was trying to make was that there is no train that has a definite day in and day out concert of over fourteen cars, but it frequently handles more than fourteen cars.

Q. Upon what considerations or conditions does the length of your passenger trains depend normally?

[fol. 546] A. Generally on the ability to heat the rear car in the train. That is one limitation we have placed on the passenger trains. In severe weather we limit our regular passenger trains to not exceeding sixteen cars, undoubtedly because of our feeling that that is the maximum number of cars we can heat in severe weather.

Q. What do you mean by severe weather?

A. To below zero.

Q. Below zero?

A. Yes.

Q. Have you encountered below zero frequently in any part of your main between Chicago and New Orleans?

A. Not frequently, we do have weather that severe probably fifteen or twenty days out of the year. That is merely a guess.

Q. That is bases upon your—

A. Observation.

Q. —experience over the past 30 years or more?

A. Yes. In the summer time there is no limit for the passenger train and we have handled passenger trains with as many as twenty-one cars, satisfactorily maintaining the schedule.

The Court: Did I understand you to say 21 cars?

[fol. 547] A. Yes.

Mr. Mason: Q. Do you handle Pullman equipment in your passenger trains?

A. We do.

Q. Is that of the same type generally used throughout the United States?

A. Yes.

Q. Do you handle any through-Pullmans interchanged with the Southern Pacific at New Orleans or at any other points?

A. Yes, we have a Pullman car line of operations from Chicago to Houston, Texas.

Q. Over the Southern Pacific west of New Orleans to Houston?

A. Yes.

Mr. Mason: This may be a repetition, I am not certain, because I ~~have not consulted the record.~~

Q. Mr. Young, if you have not already stated, will state for the record what consideration governs the length of freight trains operated on the Illinois Central?

A. My recollection is that I answered that yesterday. The first consideration is the tonnage that is available. The next is the grade, the size of the engine and the length of the passing tracks in a single track territory.

[fol. 548] Mr. Mason: As I recall, you did answer along the same lines. That is all, you may cross examine.

[fol. 549] Cross-examination.

Mr. Strouss: Q. Mr. Young, upon what information do you base the statement that over 50 per cent of your passenger trains are over 14 cars?

A. From observation and from glancing at this exhibit which I have in front of me.

Q. Mostly from the exhibit, is that not true?

A. I wouldn't say so because as I have testified previously I ride these trains and observe and when I was superintendent of transportation I actually made up the consist of the trains.

Q. At the present time of the make-up or consist of each train during the day, that information would come to you only by way of records unless you happened to ride one of the trains, you wouldn't be riding them all or seeing them all?

A. No, sir, sort of like knowing how many rooms are in your house, you don't count them every day but you know how many rooms you have by having been in the house.

Q. I don't understand what you mean by that. Your statement then is based upon the assumption that a train having a certain length of train one day would have the same length of train the next day?

[fol. 550] A. No, maybe I didn't understand your question. I understood you to ask me how I knew that these trains had these varying lengths.

Q. As I understood your testimony you said that over 50 per cent of your passenger trains during the year would carry a consist of over 14 cars. I wondered how you knew what that percentage is because it doesn't seem to me you could have seen a majority of those trains to know of your own knowledge that fact.

A. I see the movements report of the passenger trains every day which shows the number of cars in each train and then I see the train sheets when I am in the dispatcher's office out on the railroad and I observe the trains naturally when I ride on them and it is a combination of the three, the use of the records, my personal observations, and the reports.

Q. Yesterday you testified that better than 99 per cent of the boxcars owned by the Illinois Central are now steel or steel underframe cars. Did you mean by that statement that over 99 per cent of your boxcars are both steel and steel underframe or that the combination of the two makes up the 99 per cent.

A. The combination of the two.

[fol. 551] Q. How many boxcars does the Illinois Central own?

A. Approximately 44,000.

Q. How many were built in 1937 and 1936?

A. I haven't that record with me. It is my recollection there were about 2,000 cars added to our ownership in 1937.

Q. What about 1927?

A. I will again have to speak from memory. It is my recollection we bought some automobile cars in 1927. I was superintendent of transportation at that time and I believe that is the time that the so-called loading devices showed up in automobile boxcars.

Q. Of course you have in service cars that were built in years prior to that?

A. Yes.

Q. In your testimony yesterday you testified concerning the engines owned by the Illinois Central and you specified those that were similar to the engines shown in defendant's exhibits 5 and 6. Does the Illinois Central own engines of a type different than those shown by either exhibit 5 or 6?

A. Yes, I think as I recall; Mr. Strouss, I mentioned some of those differences yesterday. We haven't all of the types [fol. 552] which are shown on this exhibit.

Q. Did you mention all of the types of engines that the Illinois Central owns in your testimony yesterday?

A. No, we have some eight and ten wheel switch engines which are not shown on this exhibit and we have some Diesels which are not shown on the exhibit and we have some straight electric switch engines which are not included on his exhibit.

Q. The information contained on the exhibits which you have testified to with the exception of exhibit No. 31 reflects your complete system operations including your terminal operations, isn't that true?

A. Yes.

Q. And exhibit No. 31 is limited to main line operations on the territory shown?

A. That is true.

Mr. Strouss: That is all.

Redirect examination.

By Mr. Mason:

Q. Mr. Young, as superintendent of transportation was it your duty to order the consist of the passenger trains from day to day?

A. In a measure, yes, the superintendent of transportation [fol. 553] sets up the regular consist of the train and then it was through him or his staff that cars were added to or taken from the train.

Q. I don't think we included in your direct examination reference to special trains. Does the Illinois Central from time to time operate special trains or extra sections of regular passenger trains?

A. Yes, and it was generally the special trains of troops or C. C. C. movements which go up to the 21 cars I mentioned.

Q. Do special trains of that type and special trains for other parties exceed 14 cars in length at times?

A. That is correct, and some of the special movements carrying delegations or organized parties insist that they be kept together. For instance, we have had some Shrine movements going to conventions which were kept together for that reason. They exceeded 14 cars.

Mr. Mason: That is all. Thank you.

Recross-examination.

By Mr. Strouss:

Q. In your report to the Interstate Commerce Commission, your annual report, you show the average passenger [fol. 554] train lengths for your passenger train operations for the year, do you not?

A. I believe we do. Without looking at the report I couldn't say.

Q. Do you know what that was for the year 1939?

A. No, I don't. It would be considerably less than 14 cars because it would include the one and two car trains as well as the trains which consisted of more than 14 cars.

Q. I was limiting the question to main line operation.

A. If that item appears in the report to the Interstate Commerce Commission as an individual item it can be calculated. It would refer to all passenger trains, they were not separated as between main lines and what are called secondary lines. That is my recollection of having looked at the reports.

Mr. Strouss: It is probably not a fair question to the witness if you are not familiar with the annual reports but my understanding was that the branch line and main line operations were broken down or summarized.

A. I don't think they are.

Mr. Strouss: It would show by exhibit No. 9 but if you [fol. 555] don't have the information as to your main line operations naturally you cannot answer my question.

Redirect examination.

By Mr. Mason:

Q. Your company operates a very extensive suburban service running out of Chicago through nearby points on the south side of that city, doesn't it?

A. Yes, sir, about 480 trains a day.

Q. Those are all passenger trains of course?

A. Yes.

Q. Their operation is in a sense segregated and not on the same lines as your main line steam trains?

A. That is true, the suburban tracks are separated from the main line through passenger tracks.

Q. Nevertheless all of those through passenger train operations and suburban service would enter into your total of passenger train operations?

A. I think that is correct, I am not sure.

Q. If there is any over-all average of passenger train lengths it would necessarily include suburban trains—

Mr. Strauss: If you know.

[fol. 556] A. I am not sure about that, I would have to look at that. I can look it up if you give me the time to examine the reports but I do not make those detailed mileage reports.

Mr. Booth: Those reports will be here next week.

Mr. Mason: Perhaps we can defer the question then.

Mr. Strauss: That is all right, I thought it was understood I had withdrawn my question when he announced that he didn't know.

Mr. Mason: That is all then, Mr. Young.

The Court: You may step aside, Mr. Young.

(The witness was excused.)

Mr. Mason: Before we call the next witness, Your Honor, Dr. Parmelee and ourselves have read through the reporter's transcript of his testimony and we have now certain corrections to submit which we should like to submit to the court and opposing counsel for their examination and we ask that the transcript be corrected after examination has been made in line with these suggestions.

Mr. Strauss: I was under the impression, Mr. Mason, that we were each going to more or less edit our own portion.

of the record and could get together, I don't think we will [fol. 557] have any difficulty in agreeing as to the corrections, and not bother the court to see if they should be made or not.

Mr. Mason: If that is preferable I will withdraw any request for an order.

The Court: I think you better withdraw it and see if you cannot iron it out.

(Discussion off the record)

P. G. OTTERBACK was called as a witness in behalf of the defendant and being first duly sworn testified as follows:

Direct examination.

By Mr. Mason:

Q. What is your present employment?

A. I am assistant to the chairman of the Western Railways Committee on Public Relations at Chicago.

Q. What has been your experience in railroad service?

A. I was first employed in 1919 as statistical assistant at the Bureau of Railway Economics.

Q. Is that the same bureau described by Dr. Parmelee?

A. That is the same bureau. I later became assistant to the director of that organization. Subsequently I was [fol. 558] employed as a member of the public relations staff of the Pennsylvania Railroad and of the Association of Railway Executives as chief statistician of the National Transportation Institute, as a member of the transportation and communication department of the Chamber of Commerce of the United States and since April, 1925, or for the last fifteen and one-half years in my present capacity.

Q. What has been the scope of your duties in your present capacity generally?

A. My work throughout the entire twenty-one years has been largely of a statistical character.

Q. Has it been principally in connection with transportation statistics of railroads?

A. Entirely in connection with transportation statistics.

Q. What was your academic preparation prior to 1919?

A. I received the degree of Bachelor of Science from Colgate University.

Q. Have you prepared a series of exhibits for this hearing?

A. Yes, sir.

Q. Have you a statement in two sheets besides a title sheet entitled, "Total Number of Locomotives and Total [fol. 559] Number of Freight-Train Cars, excluding Caboose Cars, All Railways of the United States, and so forth"?

A. Yes, sir.

Q. Was that prepared by you personally?

A. It was.

Q. From what sources was it prepared?

A. The figures for the years 1890 to 1938 inclusive were taken from the official published reports of the Interstate Commerce Commission entitled "Statistics of Railways in the United States." The figures for the year 1939 were taken from the official published reports of the Interstate Commerce Commission entitled "Preliminary Abstract of Railway Statistics."

Q. Are any of these publications available in the courtroom?

A. I understand that the reports of the Interstate Commerce Commission for the period from 1922 to date are available here. As a matter of fact the Commission's current report contains a historical table which carries these figures back to the year 1890.

Q. Then these figures are available in the current report back to the year 1890 in the table to which you refer?

[fol. 560] A. With one slight exception. The figures for the period from 1890 to 1910 which cover all railway are included in this 1938 report. The figures from the period of 1911 to date cover class I railways alone. Those figures are not shown in this historical summary which covers all railways.

Q. Are those figures for Class I railways from 1911 to date otherwise shown in these statistical reports to which you refer?

A. They are shown in the statistical report for each year.

Q. Each year of the annual issue?

A. That is correct.

Q. Have you compared the exhibit against the original source to determine its correctness?

A. I have.

Mr. Mason: I should have asked previously that the exhibit be marked for identification, which would be defendant's exhibit No. 32.

The Clerk: Thirty-two for identification.

Mr. Mason: Q. I notice on the exhibit that on sheet 1 and likewise on a portion of sheet 2 the references to the years ending June 30 and thereafter, after 1916 to the years ending December 31. Will you explain how that comes about?

A. Those years changed from a fiscal year basis to a [fol. 561] calendar year basis because of a change in the classification in the accounting rules of the Interstate Commerce Commission. When the Interstate Commerce Commission first required annual reports of the railways of the country it required those reports upon the basis of year ending June 30. That situation existed through year ending June 30, 1916. In that year the change was made to the present basis of reporting for the calendar year.

Q. I notice also that the exhibit shows on the first sheet statistics for all railways but on the second sheet is limited to Class I railways. Why is that?

A. Prior to 1910 there was no classification made by the Interstate Commerce Commission which grouped railways in any way other than a territorial grouping. Effective in the fiscal year 1911 the Interstate Commerce Commission adopted its present system of classifying railway companies into classes I, II, and III. The companies included as Class I railways are those companies with annual operating revenues in excess of one million dollars.

The Court: We will take a brief recess at this time.

[fol. 562] Thereupon a brief recess was taken after which proceedings were resumed as follows:

Mr. Mason: Mr. Otterback, I don't know whether I made it clear or not but do I understand also that the publication for 1939 entitled, "Preliminary Abstract," and which is stated as the source of the 1939 figures is also in the courtroom and available for the examination of opposing counsel?

A. It is, yes, sir.

The Court: Let me get this straight, Mr. Witness. As to this particular exhibit, did I understand you to testify there is in the courtroom the reports from which the figures shown here were taken?

A. With the exception of the period of years beginning with the fiscal year ending June 30, 1911 and running through the calendar year ending December 31, 1921. In the 1938 Statistics of Railways in the United States published by the Interstate Commerce Commission there appears, as I have said, a historical table carrying this information back to the year 1890 and that table however covers all railways in the United States. Those figures in that table correspond to the figures shown on page 1 of exhibit No. 32.

[fol. 563] Mr. Mason:

Q. Do I understand that there are statistics for all railways in the United States subsequent to June 30, 1911, which appear in the table but not segregated as to class I railways?

A. That is correct.

Q. So that these precise figures for the approximate ten-year period that you have referred to in your answer to the court's question do not appear in that particular table?

A. No, sir.

Q. And those reports, "Statistics of Railways," are not in the courtroom?

A. They are available in the city, I understand but they are not in the courtroom at the present time.

Mr. Booth: Where are they available in the city?

A. I think at the library at the University of Arizona.

Mr. Booth: Can you verify that?

A. Very readily, yes, sir.

Mr. Mason: During the noon recess?

A. Yes, sir.

Mr. Booth: I don't think the rule of evidence outlined by Your Honor this morning applies with all strictness to the production in the courtroom of standard books of [fol. 564] reference. I think if standard books of reference are shown to be available at the place where the court is sitting, for instance, if a man says the Encyclopedia

Britannica defines Texas beaver to be so and so and it is in the library then counsel can go and look at it. I think that is the exception to the rule. However, if they are in the public library here there would be no great trouble in bringing them in. At any rate whatever is in the courtroom here supports the greater part of the exhibit and the part that is most material to this case.

Mr. Mason: May I ask, Mr. Strouss, will you desire to have produced those volumes from the University of Arizona Library for the years 1911 to 1921 inclusive if they are available?

Mr. Strouss: No, I won't insist on that. Of course I have another objection to this evidence but so far as bringing those into court, if they are out there, I won't insist upon that.

Mr. Mason: Do you wish to question the witness before the exhibit is offered, Mr. Strouss?

Mr. Strouss: This data that is in the records of the Interstate Commerce Commission to which you refer, those are computations by the Interstate Commerce Commission [fol. 565] or its agents from the annual reports of the Class I railways for each of the years indicated, isn't that correct?

A. Yes, sir.

Mr. Strouss: That is all the questions I have.

The Court: Mr. Strouss, in order that the court will have it clearly in mind will you kindly restate your objection to this particular exhibit.

Mr. Strouss: I was going to state a further objection.

The Court: Probably you better offer it.

Mr. Mason: I offer the exhibit as defendant's exhibit No. 32.

Mr. Strouss: You mean the further objection I have?

The Court: Yes.

Mr. Strouss: I was going to state the objection, that in addition to the objections which I have heretofore made which may be taken as a running objection, there is a further objection to this, that the record from which this is taken is not a record which would be admissible in itself because it is a summary of other records and this is a summary from a summary and for that reason I think it is inadmissible.

The Court: The objection is overruled. It may be admitted.

[fol. 566] Thereupon the document referred to was received in evidence and marked defendant's exhibit No. 32.

Mr. Mason: Mr. Otterback, do I understand that these figures which appear on this exhibit are exact copies of the figures which appear in the underlying document as the source?

A. They are, yes, sir.

Q. They don't represent any compilation or addition of your own?

A. Not in the slightest.

Q. There are no computations on the exhibit which you have made.

A. None, whatsoever.

Mr. Mason: I think Your Honor may recall that the publication, Statistics of Railways in the United States, and the other publication, Preliminary Abstract of Railway Statistics, have both been identified as official publications of the Interstate Commerce Commission regularly and periodically issued by it in the course of its official duties and made available to all those who may be interested.

Mr. Strouss: My other objection is also made to all of this testimony by this witness.

The Court: Yes.

Mr. Mason: I understand that the objection as to the [fol. 567] non-availability of the underlying records has already been expressed.

Mr. Strouss: Yes, as far as those statistics of American railway volumes are concerned I am not insisting that they be brought into court.

Mr. Mason:

Q. Will you refer to the exhibit, and I ask you particularly to refer to sheet 2, Mr. Otterback, and call attention to the particular features of the figures shown there which you desire to emphasize.

Mr. Strouss: If the court please, I object to that, I think the exhibit speaks for itself, it shows the number of locomotives—

The Court: No, the objection is overruled.

A. Sheet No. 2 of exhibit No. 32 shows that between 1890 and 1910 there was a constant upward trend in the

number of locomotives in service, such number of locomotives increasing from 30,140 in the year ending June 30, 1890, to 60,019 in the year ending June 30, 1910. There was a similarly marked but not continuous upward trend in the number of freight train cars in service, such cars increasing in number from 918,491 in the year ending June 30, 1890, to 2,148,478 in the year ending June 30, 1910.

Mr. Mason:

Q. Did the upward trend in the number of locomotives [fol. 568] and number of cars as to Class I carriers continue after 1910?

A. As shown by the final page of exhibit No. 32 there was an irregular but marked upward trend in the number of locomotives in service from 58,071 in 1911 to a peak of 65,358 in 1924. There was a similar irregular but substantial upward trend in the number of freight train cars from a total of 2,117,644 in 1911 to a peak of 2,361,102 in 1919 and to a secondary peak of 2,357,234 in 1925.

Q. Was has taken place since the two years mentioned, 1924 and 1925?

A. There has been a steady decline in the number of locomotives in service ever since 1924 and a similar steady decline in the number of freight train cars in service since 1925.

Q. Has this decline in the number of units in service of both classes of equipment had any effect upon the capacity of such units for service?

A. The aggregate tractive power of locomotives and the aggregate capacity of freight carrying cars has not declined in similar proportion to the reduction in the number of equipment units because of the increases which have occurred during the period in average tractive power per [fol. 569] steam locomotive and average capacity per freight carrying car.

Q. Does the showing of average tractive power and average freight car capacity occur later in your testimony?

A. Yes, sir.

Q. What significance do you as a statistician attach to the reduction in number of equipment units in service?

Mr. Strauss: We object to that as calling for a conclusion.

The Court: Will you read the question.

(The question was read by the reporter.)

The Court: Objection is overruled. Here is an expert statistician who can possibly aid the court in pointing out certain trends. It is true that an expert should not be permitted to draw conclusions when the court can draw them but if he can aid in that way I think he should be permitted to do so. Overrule the objection.

A. The reduction in the number of units which has occurred since 1924 in the case of locomotives and since 1925 in the case of freight train cars is an indication of increased operating efficiency on the part of the railroads. In recent years this downward tendency has been partially due to the depression and to reduced traffic but this downward [fol. 570] tendency began, as I have stated, in 1924 for locomotives and in 1925 for freight train cars in the face of rising rather than falling traffic.

Mr. Mason:

Q. Have you certain figures of locomotive miles operated in various years since the number of locomotives has declined which will illustrate your last statement?

A. Yes, sir.

Mr. Strouss: May I first ask the source of that information?

A. The official published reports of the Interstate Commerce Commission entitled "Statistics of Railways in the United States."

Mr. Mason: The same source as referred to on the exhibit?

A. The identical source.

Mr. Strouss: Our objections heretofore made go to all of this testimony.

The Court: Yes, objection overruled.

Mr. Mason: Will you proceed.

A. This increased efficiency of operation, which means in effect the ability of the railroads to do more with less, is indicated by the following figures of total locomotive mileage which includes both transportation service and work service. This total locomotive mileage as shown on the

[fol. 571] official reports of the Interstate Commerce Commission amounted to approximately one billion, one hundred forty-two million miles in 1939; one billion, eighty-two million miles in 1938; one billion, eighty-four million miles in 1935; one billion, sixty-five million miles in 1934; one billion, thirteen million miles in 1933 and one billion, forty-three million miles in 1932. In other words, more miles were run by locomotives in 1939 than in 1938, 1935, 1934, 1933, or 1932, yet there were fewer locomotives in service in 1939 than in any of those specified prior years.

Q. Have there previously been introduced of record here the volume of revenue freight service for each of the years as measured in ton miles?

A. The previous exhibits have shown the volume of revenue freight service measured in terms of revenue ton miles and these figures are also shown in subsequent exhibits of my own.

Q. Have you certain figures of revenue ton miles which will indicate the utilization of freight equipment by the railroads for various years along the same line as your showing of relative utilization of locomotives?

A. Yes, sir. The volume of revenue freight service amounted to approximately 333 billion revenue ton miles [fol. 572] in 1939 to approximately 290 billion revenue ton miles in 1938; to 282 billion in 1935; to 269 billion in 1934; to 249 billion in 1933; to 234 billion in 1932; to 309 billion in 1931; to 307 billion in 1921; to 274 billion in 1915; to 285 billion in 1914; to 298 billion in 1913; to 260 billion in 1912; to 250 billion in 1911. Revenue ton mileage was thus greater in 1939 than in any of the years 1938, 1935, 1934, 1933, 1932, 1931, 1921, 1915, 1914, 1913, 1912, and 1911, yet there were fewer freight cars in service in 1939 than in any of those specified prior years.

Q. Does that conclude your comments on No. 32?

A. Yes, sir.

[fol. 573] Q. Have you a statement consisting of a title page and one other page, bearing the title: "Number of Steam Locomotives for which tractive power was reported, aggregate tractive power reported, and average tractive power per steam locomotive, all railways, United States, 1903-1910, Class J Railways, United States, 1911-1939?"

A. Yes, sir.

Mr. Mason: May we have the statement just referred to marked as Defendant's No. 33 for identification.

The Clerk: Defendant's No. 33, for identification.

Mr. Mason:

Q. Mr. Otterback, was Exhibit No. 33, marked for identification, prepared from the same sources and in the same manner as Exhibit No. 32?

A. The figures in the columns headed "Number of steam locomotives, Aggregate tractive power pounds, and Average tractive power pounds" were all taken from the same source as were the figures in the previous exhibit; that is, reports of the Interstate Commerce Commission. The figures in the last two columns of the exhibit, entitled "percentage increase over previous year, and percentage increase over 1903" are calculations which I made.

Q. Did you personally make the calculations in the two columns on the right-hand side?

A. Yes.

Q. And they are merely arithmetical calculations which can be checked against the figures in the preceding columns?

A. That is correct.

Q. And the other figures that appear, as here presented, were taken, as indicated in the footnote of the sheet, from the underlying sources referred to?

A. Yes, sir.

Q. Which are the same as those used in connection with the prior exhibit?

A. Identical with the prior exhibit.

Q. Have you checked the exhibit to determine whether it is true and correct?

A. I have.

Q. And will you state whether or not it is true and correct?

A. To the best of my knowledge and belief, it is.

Q. I notice that the showing commences with the year ending June 30, 1903, will you say why a showing for prior years is not included?

[fol. 575] A. The fiscal year 1903 is the first year for which these figures were compiled and published by the Interstate Commerce Commission.

Q. The figures for the years prior to and including the year ending June 30, 1910, related to all railways of the United States of the various classes.

A. The classes of railways covered are identical with those in the previous exhibit. That is, all railways are covered through the year ending June 30, 1910, while for the years 1911 to 1939, inclusive, Class I railways only are included.

Mr. Mason: Subject to the objections previously urged, and with the understanding, which I assume will extend to this exhibit, that the reports or statistics of railways of the United States for the years 1911 to 1921, inclusive, will not be insisted upon, we offer the exhibit in evidence.

Mr. Strauss: Subject to our objections.

The Court: The objection is overruled. It may be admitted.

The Clerk: Defendant's Exhibit No. 33, admitted in evidence.

Mr. Mason:

Q. I will ask you first, Mr. Otterback, in connection with Exhibit No. 33, in evidence, if there is any difference as [fol. 576] between the showing on Exhibit No. 33 and the showing of locomotives on exhibits No.—Exhibit No. 32, and if so how that difference arises?

A. There is a slight difference in the earlier years from the figures shown on Exhibit No. 32. This difference arises from the fact that in the earlier years complete reports apparently were not made of tractive power covering all locomotives in service. The volume of Statistics of Railways in the United States, fiscal year 1903, for instance, the computations of all classes for the year covered by that report, show the number of steam locomotives as 43,245, with an aggregate tractive power of 941,915,540 pounds. Since 1923, however, and for some of the earlier years the figures shown on Exhibit No. 33 are identical with those shown on Exhibit No. 32.

Q. Does the failure to report tractive power for all locomotives for the earlier years have any substantial effect upon the comparisons, the percentage comparisons, shown in the right hand column?

A. It would have some slight effect. In the same report of the Interstate Commerce Commission, previously mentioned, that is Statistics of Railways in the United States [fol. 577] for the year 1903 the commission states: The completeness of the classification for the year covered by

this report is seen from the fact that out of 43,871 locomotives the classification includes 43,245. Estimating the average tractive power of the 626 locomotives unclassified at below those of single-expansion locomotives, the aggregate tractive power of the locomotives in service on June 30, 1903 may be safely estimated at 950 million pounds. If we use this estimate—

Q. I think you said estimate—?

A. I said, using the estimate of the Interstate Commerce Commission of 950 million pounds for the aggregate tractive power of 43,871 locomotives there would be derived an average of 21,654 pounds per steam locomotive. This is somewhat below the figure of 21,781 pounds which is shown in the third column of exhibit No. 33. In other words, the omission of certain locomotives from this report would have the effect of overstating the actual average tractive power per steam locomotive in the earlier years, and consequently understating the increase which has subsequently occurred.

Q. Would the figures be an overstatement or understatement, or substantially the same?

A. It would be relatively slight, but it would be an under-[fol. 578] statement, not an overstatement.

Q. The exhibit particularly refers to tractive power, or tractive force. Briefly stated, what is tractive power, and does it accord a measure of comparing locomotives?

A. In connection with the introduction of Defendant's Exhibit No. 8, a definition of "Tractive Power" was made by Mr. Frank E. Russell. At page 95 of the record, Mr. Russell stated: "Tractive power is the effort that the locomotive exerts at the rim of the driving tire on the rail to move itself forward and backward as the case may be."

Q. Do you desire to call attention to the figures in the third column of the exhibit relating to average tractive power, as indicating any comparisons between earlier periods and the present day?

A. The figures in the third column of Exhibit No. 33, under the heading, "average tractive power" show a steady and substantial increase throughout the entire period covered by the exhibit, from an average of 21,781 pounds in 1903, to an average of 50,335 pounds in 1939, an increase, as indicated by the figures in the last column of 131.4 per cent, which means in effect that in terms of tractive power,

ten locomotives of 1939 are an equivalent of twenty-three of 1903.

[fol. 579] Q. Have you, or can you from the exhibit make a comparison between the locomotives of 1912 and those of 1939 in the same terms?

A. Between 1912 and 1939, the average tractive power per steam locomotive has increased from 28,987 pounds to 50,395 pounds.

Q. Then how many locomotives of the 1912 average power would be required to produce the same tractive power as ten average 1939 locomotives?

A. I will have to figure that out.

The Court: While the witness is making that computation, Mr. Strouss, the reason the Court is overruling your objection to the conclusions, if they may be termed such, of this witness, I take it that the rule stated in Jones' Commentaries on Evidence, Vol. 3, section 1312, has application here. It says: In a great variety of cases where the subjects under investigation are wholly unfamiliar to the jury or even to the judge, there would be no adequate mode of arriving at any satisfactory conclusion if expert testimony were rejected. In recognition of this fact the courts have adopted a rule admitting the opinions of experts whenever the subject matter of inquiry is such that inexperienced persons are unlikely to prove capable of forming a correct judgment without such assistance. In other words, expert testimony is admissible whenever the subject so far partakes of the nature of a science as to require a course of previous habit or study in order to attain a knowledge of it. And where such is not the case, the general rule excluding opinions of witnesses comes into play, as shown in the opening sections of this chapter. In other words, it permitted an expert to give you the trend of these figures that might otherwise be quite meaningless to the Court.

Mr. Mason: We don't undertake to offer any opinion showing what may be termed certain or ultimate issues presented here, but only to ask the witness to draw certain inferences which to him may be obvious but to us in the legal profession may not be so obvious.

The Court: That statement seemed applicable to this situation.

Mr. Strouss: Of course, that was just one of the objections we had.

The Court: I understand. I just wanted to make my position clear, because I am frank to say that these statistics would be quite meaningless were not this witness permitted to point out the trend.

[fol. 581] Mr. Strouss: I appreciate that the rule of expert testimony is a very close one in many instances, that is, whether or not the testimony is within the rule. There is a statement somewhat different in 21 Am. Jur. 652-53. That is one statement of the rule; and again at 653-4. The rule as stated there would at least raise some question as to whether this witness' testimony was admissible. I recognize it is often a very close question.

The Court: You may proceed.

Mr. Mason:

Q. Have you those computations made now which would enable you to answer my last question?

A. Yes sir. In terms of average tractive power, ten steam locomotives of 1939 are roughly equivalent to seventeen average steam locomotives of 1912.

Q. Does that conclude your comments at this time on Exhibit No. 33?

A. Yes sir.

Q. I direct your attention, Mr. Otterback, to a chart of a single sheet, bearing the title "Average tractive power per steam locomotive, all railways, United States, 1903-1919, Class I Railways, United States, 1911-1939", have you the [fol. 582] chart before you?

A. Yes sir.

Q. May we have this statement, or chart rather marked for identification and marked as defendant's Exhibit No. 34?

The Clerk: Defendant's Exhibit No. 34, marked for identification.

Mr. Mason:

Q. Mr. Otterback, will you state whether chart, Exhibit No. 34, marked for identification, simply places in graphic form on paper the figures of average tractive power shown on the column bearing that heading on Exhibit No. 33?

A. Exhibit No. 34 is a graphic representation of the figures appearing at column 3 of Exhibit No. 33. Those figures being repeated at the top of Exhibit No. 34.

Q. Along the margin or cross section?

A. Yes, that is correct.

Q. What do the circles upon the line which crosses the chart from the lower left to the upper right, what do they indicate?

A. They indicate the exact reading for each of the years shown upon the chart.

Q. And I take it that the underlying figures from which the chart was prepared are those shown on the exhibit and taken as in the case of Exhibit No. 33 from the Interstate [fol. 583] Commerce Commission's publication mentioned by you?

A. That is correct.

Q. Did you supervise the preparation of this chart?

A. I drew the original of it. I am afraid it has subsequently been redrawn, as this one is in much better shape than mine was.

Q. This is in somewhat better shape than the original?

A. Yes.

Q. Have you made a check against the original sources to determine whether it is substantially correct?

A. I have.

Q. The scale, I take it, is shown on both sides of the chart?

A. The scale in pounds is shown on both sides of the chart at intervals of five thousand pounds, starting at the base line of 20,000 pounds.

Mr. Mason: Subject to the objections previously expressed, and if Mr. Strouss has no additional objections, we offer the exhibit as No. 34 in evidence.

Mr. Strouss: I have no additional objections.

[fol. 584] The Court: It may be admitted.

The Clerk: Defendant's Exhibit No. 34, admitted in evidence.

Mr. Mason:

Q. I take it that the purpose of No. 34 is simply to present in the form of a graph, where the picture may be readily seen, the same figures that appear on Exhibit No. 33?

A. That is correct.

Q. Have you any additional comments on Exhibit No. 33?

A. I think there is no comment necessary. It merely indicates the substantial upward trend which appears on Exhibit No. 33.

Q. Will you refer, please, to a statement in one sheet, exclusive of the title sheet, bearing the designation "Average Tractive Power by types of Locomotive Class I Railways, United States, have you that exhibit before you?

A. Yes sir.

Q. From what source was this exhibit prepared?

A. This Exhibit was prepared from the official published reports of the Interstate Commerce Commission, entitled "Statistics of Railways in the United States".

Q. And those are the same statistical reports which have [fol. 585] previously been referred to and identified in connection with preceding exhibits?

A. Yes sir.

Q. Is there any computations on this exhibit which you have personally made?

A. None whatsoever.

Q. These are all copies of entries in the original report?

A. That is correct.

Q. Has the exhibit been compared?

A. It has.

Q. Will you state whether it is true and correct?

A. To the best of my knowledge and belief it is true and correct.

Q. I notice that the exhibit commences with the year ended June 30, 1915, will you state the reason for the omission of earlier years?

A. There is an omission of the earlier years in Exhibit No. 35, and there is also a gap between the calendar year 1916 and the calendar year 1924. For a period of three years, the fiscal year 1915, the fiscal year 1916 and the calendar year 1916, the Interstate Commerce Commission compiled and published in its official reports the figures shown [fol. 586] on Exhibit No. 35 for the average tractive power of freight locomotives, of passenger locomotives and of switching locomotives separately. The classification of freight and passenger locomotives was not definitely made by the Commission in those earlier years, the classification being based rather as indicated by foot notes a and b, upon the diameter of locomotive driving wheels. After a lapse of eight years, or from 1916 to 1924, the Interstate Com-

merce Commission renewed the compilation and publication of these figures, classified the locomotives separately as freight and passenger locomotives, freight or passenger locomotives, and switching locomotives. (

Mr. Mason: Subject to the objections previously expressed, we offer the statement in evidence as Exhibit No. 35. I notice it has not been marked for identification.

The Clerk: Defendant's Exhibit No. 35, marked for identification.

Mr. Mason: We now offer it in evidence.

Mr. Strouss: I have no further objections. The objections already made apply.

The Court: The objections overruled. It may be admitted.

[fol. 587] The Clerk: Defendant's Exhibit No. 35, admitted in evidence.

Mr. Mason: Does Exhibit No. 35 carry forward the story and the showing presented by Exhibits Numbers 32 and 33, as to locomotives, Mr. Otterback?

A. It carries in considerably more detail and over a shorter period of time a showing similar to that appearing in Exhibits 33 and 34. As shown by Exhibit No. 35, the average tractive power per freight locomotive has increased from 33,200 pounds in 1915 to 55,943 pounds in 1938. The average tractive power of passenger locomotives has increased in the same period from 27,811 pounds to 37,793 pounds; the average tractive power per switching locomotive in the same period has increased from 27,164 pounds to 40,327 pounds. From 1924, the earliest date for which this information is available to 1938 average tractive power per freight or passenger locomotive has increased from 29,747 pounds to 51,943 pounds. The trend toward the use of more powerful locomotives is again clearly marked in this exhibit as in the two prior exhibits.

Q. I take it that the same computation could be made for a prior year as to the equivalent locomotives of an earlier [fol. 588] year, required to produce the same tractive efforts as 10 locomotives of 1939.

A. Such compilation could readily be made.

Q. You haven't undertaken it in this exhibit?

A. No.

The Court: We will be at recess until 2: o'clock this afternoon.

[fol. 589]

Thursday, November 28, 1940, 2:00 P. M.

All parties being present as heretofore notes, proceedings were resumed as follows:

The Court: You may proceed.

P. G. OTTERBACK a witness called on behalf of the defendant, resumed the stand and testified further as follows:

Direct examination.

By Mr. Mason (Continued):

Q. Mr. Otterback, have you before you the statement consisting of the cover page and four other pages bearing the title "Oil Burning Steam Locomotives and Steam Locomotives equipped with Mechanical Stokers, with Superheaters and with Boosters, by Types of Locomotives, Class I Railways, United States"?

A. Yes, sir.

The Court: May that be marked, 36?

The Clerk: Defendant's Exhibit 36.

Mr. Mason:

Q. I take it that the basic data upon which this exhibit is based is as shown in the "source" on sheet 4 of the exhibit itself?

A. That is correct. The basic data in each instance was taken from the official published reports of the Interstate Commerce Commission, entitled "Statistics of Railways in [fol. 590] the United States."

Q. How far back does the exhibit go, just to 1924?

A. The periods covered by the various sections of the exhibit vary extensively, and go back in each instance to the earliest date for which this information was compiled and published by the Interstate Commerce Commission. In certain instances the exhibit goes as far back as the calendar year 1924. In other instances the calendar year 1930, and in still in other instances to the calendar year 1932. The figures terminate in every instance with the calendar year 1938, as that is the latest year for which the Commission's publication, "Statistics of Railways in the United States" has now been issued. This detail is not

shown in the preliminary abstract of Railways Statistics, which is the report now available for 1939.

The Court: Do I understand then, Mr. Otterback, that there are available here in the court room the basic reports from which all of these were taken?

A. That is correct, your honor, as far as the basic figures go. Certain sections of this exhibit constitute percentage calculations which I myself have made. Those percent- [fol. 591] ages, however, are based upon figures shown in the exhibit.

Mr. Mason:

Q. Now, the figures on the exhibit which show the total numbers, or the numbers in particular classes, are themselves taken from the underlying reports, the underlying statistical reports for the several years issued by the Interstate Commerce Commission?

A. That is correct.

Mr. Booth:

Q. You read Mr. Russell's testimony, did you not?

A. Yes, sir.

Q. And he explained briefly what was meant by mechanical stokers, superheaters and boosters?

A. He explained mechanical stokers, as I recall, judge, and boosters. I don't recall whether or not he mentioned superheaters.

Mr. Mason: I recall that he did mention superheaters. Do you remember that, Mr. Strouss?

Mr. Strouss: Yes, he did.

The Court: Yes.

Mr. Mason:

Q. The percentage computations are of your own doing, are they?

A. Yes, sir.

Q. And has the exhibit been checked against the original sources and the computation also checked?

A. Both the original figures and the computations have [fol. 592] been checked.

Q. Will you say whether the exhibit is true and correct to the best of your knowledge?

A. To the best of my knowledge and belief it is true and correct.

Mr. Mason: Have you any questions, Mr. Strauss?

Mr. Strauss: No. Well, just one question.

Q. Of course, these figures in the Interstate Commerce Reports are the computations by the Commission or its agents from the different reports of the Class I railroads?

A. They are a summary made by members of the Interstate Commerce Commission staff of the annual reports of the individual carriers of Class I.

Mr. Mason: We offer the exhibit in evidence as No. 36. The Court: The record may show the same objection and that the objections are overruled.

The Clerk: Defendant's Exhibit 36 in evidence.

Mr. Mason:

Q. Now, will you address yourself to section one of the exhibit and briefly explain just what is shown there?

A. Section I of the Exhibit 36 presents figures by years from 1924 through 1938, inclusive, showing the total number of steam locomotives, the total number of oil-burning [fol. 593] steam locomotives and a percentage relationship of oil-burning steam locomotives to the total steam locomotives; such relationship increasing from 11.3% in the year 1924 to 15.1% in the year 1938.

Q. What do you present in section 2 of the exhibit?

A. Section 2 presents by years from 1930 to 1938, inclusive, figures showing the total number of steam locomotives by types, that is the separate figures for freight locomotives, for passenger locomotives, for freight or passenger locomotives and for switching locomotives.

Q. Do you carry that classification further in Section 3 with respect to oil-burning steam locomotives?

A. That is correct. I might add that these figures shown in Section 2 of the exhibit are presented primarily for the purpose of permitting the computation of subsequent percentage relationships.

Q. Does Section 4 of the exhibit present one of those computations of percentage relationships?

A. Yes sir, it does.

Q. Will you explain just what you have undertaken in Section 4?

A. Section 4 shows for the period for which such information is available, that is, for the years from 1932 to 1938, inclusive, the percentage relationship by types of oil-burning steam locomotives to total steam locomotives. That percentage during the period has increased from 13.8% to 15% in the case of freight locomotives; has increased from 15.9% to 18.3% in the case of passenger locomotives; has declined from 21.2% to 19.5% in the case of freight or passenger locomotives; has increased from 16.4% to 11.9% in the case of switching locomotives, and has increased from 13.8% to 15.1% in the case of all locomotives.

Q. Now, going to Section 5, what do you present in Section 5?

A. Section 5 presents for the same years which again represent the entire period for which this information is available, figures showing by types the number of steam locomotives equipped with mechanical stokers. Mechanical stokers, as explained by Mr. Russell, being mechanical devices attached to locomotives for the purpose of supplying coal to the grates.

Q. Are there any oil-burning locomotives included in this group having mechanical stokers?

A. No, sir.

Q. This includes only coal-burning locomotives which [fol. 593] have applied to them this device of mechanical stokers?

A. That is correct.

Q. What do you show in Section 6, then?

A. Section 6 shows the percentage relationship by types of steam locomotives equipped with mechanical stokers to total steam locomotives. This relationship between 1932 and 1938, has increased from 33.0% to 39.8% in the case of freight locomotives; has increased from 11.0% to 21.0% in the case of passenger locomotives; has increased from 7.7% to 15.6% in the case of freight or passenger locomotives; has remained unchanged at 0.8% in the case of switching locomotives, very few of which are equipped with mechanical stokers; and has increased from 22.1% to 28.6% in the case of all locomotives.

Q. Now, does this percentage tabulation in Table 6 of that exhibit understate the proportion of stoker-equipped

locomotives to the total of locomotives which could be possibly equipped with stokers?

A. It does. In a way it is an incorrect comparison. It is based upon the total number of steam locomotives for the purposes of consistency; but that total number of steam [fol. 596] locomotives includes certain oil-burning steam locomotives which are not susceptible, of course, of the application of a mechanical stoker; and eliminating all oil-burning steam locomotives from the total and developing a percentage relationship of steam locomotives equipped with mechanical stokers to total coal-burning locomotives, that relationship has changed between 1932 and 1938 as follows: It has increased from 38.0% to 46.8% in the case of freight locomotives; it has increased from 11.5% to 25.7% in the case of passenger locomotives; it has increased from 10.3% to 19.3% in the case of freight or passenger locomotives; has increased from 0.8% to 0.9% in the case of switching locomotives; and has increased from 23.9% to 33.7% in the case of all locomotives.

Q. What do you present in table No. 7?

A. Table No. 7 presents a combination of oil-burning steam locomotives and steam locomotives equipped with mechanical stokers by types. This combination, by the way, offsets what might be termed perhaps the inexactness of the figures shown under Section 6.

Q. On table 7, then, you have combined those locomotives which burn coal and have mechanical stokers with those which burn oil and thus have the fuel fed without manual [fol. 597] action on the part of the fireman other than the turning of the valves?

A. That is correct.

Q. Have you made any computations of the proportion of steam locomotives, including those that are stoker-equipped and those which burn oil, and the total of all steam locomotives?

A. Such compilations appear in Section 8 of the exhibit No. 36, and show that the relationship of oil-burning steam locomotives and steam locomotives equipped with mechanical stokers combined to total steam locomotives has increased from 46.8% in 1932 to 54.8% in 1938, in the case of freight locomotives; in the same span of years, it has increased from 26.9% to 39.3% in the case of passenger locomotives; has increased from 28.9% to 35.1% in the case of freight or passenger locomotives; has increased 11.2% to

12.7% in the case of switching locomotives; and has increased from 35.9% to 43.8% in the case of all locomotives.

Q. Mr. Otterback, has the subject of the equipment of coal-burning locomotives with mechanical stokers been the subject of investigation and official decision by the Interstate Commerce Commission?

A. Yes, sir, it has.

Q. Can you give me the docket numbers, titles and some [fol. 598] citation of that report?

A. This is number 24049A Johnston, Grand Chief Engineer of the Brotherhood of Locomotive Engineers, et al. vs. Atchison, Topeka and Santa Fe Railway Co., et al., reported in 225 I. C. C. 519.

Q. Are you referring now, Mr. Otterback, to a published volume of the decisions of the Interstate Commerce Commission?

A. Yes.

Q. Volume 225?

A. That is correct.

Q. And that is one of the series of the published decisions of the Commission issued from time to time and available to the general public?

A. Yes, sir.

Mr. Mason: Is your honor familiar with the Interstate Commerce Commission's published decisions?

The Court: No; I am not.

Mr. Mason: Would you care to see this one?

The Court: I have had no occasion to refer to it.

Mr. Mason: I take it that you are, Mr. Strouss, to some extent?

Mr. Strouss: Yes.

The Court: Thank you.

[fol. 599] Mr. Mason:

Q. Will you state if the Commission's decision shows I am not asking you to state that is contained therein, but just whether an order was made in the case requiring the application of stokers to certain types of coal-burning steam locomotives?

A. Such an order was entered by the Interstate Commerce Commission.

Mr. Strouss: Just a minute, certainly the decision itself is the best evidence.

The Court: I will sustain the objection.

Mr. Mason: Well, if your honor please, the decision itself does not show the order. It only shows the opinion and the foundation for the order.

Mr. Strouss: Then the order itself would be the best evidence.

The Court: That is true.

Mr. Mason:

Q. Have you a copy of the order?

A. It is in the report.

Q. What does the Commission say at the conclusion of its opinion, there, Mr. Otterback?

Mr. Strouss: If any portion of the order is to be read I will ask that the whole thing be read.

Mr. Mason: I am not asking him to read the order. I am asking him to read a portion of the opinion.

[fol. 600] Mr. Strouss: Well, I take it, the whole opinion should go in, not just the parts that they might want to take their interpretation of.

Mr. Mason: I think that the Interstate Commerce Commission's decisions themselves need no authentication. They are just as much a matter of decision as the decisions of the federal and state courts.

The Court: The Court will read it.

Mr. Mason: It is my purpose to call attention to a particular part. It does not acquire any particularly different value because a witness reads it. It has that value already. All we now do is call attention to a particular part, and I don't insist upon this. It would only shorten the proceedings a little bit, and Your Honor would get a more ready understanding, that is all.

The Court: Well, if counsel insist upon it, the objection will be sustained. However, the Court will be very glad to read the opinion and read any orders that may be there entered.

Mr. Strouss: I have no objection to that.

The Court: I will take judicial notice of it now that it has been called to my attention.

Mr. Mason: I would like myself to call the court's attention [fol. 601] judicial notice, of course, being taken of the entire report to the last paragraph, reading as follows: "An appropriate order amending our rules for the inspection

tion and testing of steam locomotives and tenders and their appurtenances to give effect to these findings, will be entered." And I will also call the court's attention to the fact that no order is entered, although the findings of the Commission are entered in detail as a part of the order.

Is this your own copy, Mr. Otterback?

The Witness: A. Yes.

The Court: All right, I will return it this evening.

Mr. Mason:

Q. Do you know, Mr. Otterback, whether an order was entered?

A. It is my understanding that such an order was entered, yes.

Mr. Strouss: I move that be stricken, what his understanding is. If he doesn't know he can't testify.

The Court: Yes, the motion to strike is granted.

The Witness: May I modify my reply, your honor?

Mr. Mason:

Q. Well, I ask you, do you know whether or not an order [fol. 602] was entered?

The Court: Answer that yes or no.

Mr. Mason: Answer that yes or no.

A. I answer it yes.

Q. You do know whether such an order was entered?

A. Such an order was entered on December 30, 1937.

Mr. Strouss: "Such an order," if that means to state what the order was, or the character of the order, we object to it.

Mr. Mason: I don't intend to do that. I am only going to ask one further thing—two.

Q. Was the effective date of the order extended from time to time?

A. The effective date of the order was extended a number of times.

Q. What is the latest effective date of the order?

The Court: That is, if you know of your own knowledge.

Mr. Mason: Yes, if you know of your knowledge.

A. April 15, 1939.

Q. Mr. Otterback, was the attachment of mechanical stokers during the years prior to and including the year 1938 made in response to any order of the Interstate Commerce Commission?

[fol. 603] A. No, sir.

Q. Now, will you turn to Table 9 of your exhibit and explain what you have undertaken to show in that table or section?

A. Section 9 of Exhibit 36 shows by types for each of the years from 1932 to 1938, inclusive, the number of steam locomotives equipped with superheaters.

Q. This device, the superheater, has been previously described in the testimony of Mr. Russell, I think.

A. I so understand.

Q. Have you read that testimony?

A. Yes.

Q. And have you undertaken in Table 10 to show a percentage relationship as between those equipped with superheaters and the total of all steam locomotives?

A. Section 10 shows such a comparison, showing that the percentage relationship of steam locomotives equipped with superheaters to total steam locomotives has increased between 1932 and 1938 from 82.5% to 91.5% in the case of freight locomotives; from 83.9% to 95.5% in the case of passenger locomotives; from 82.6% to 98.0% in the case of freight or passenger locomotives; from 54.1% to 63.1% in [fol. 604] the case of switching locomotives and from 77.6% to 87.3% in the case of all locomotives.

Mr. Booth: For the convenience of the record the testimony regarding superheaters is shown on 109 and 110 of the transcript of November 19, 1940.

Mr. Mason: Q. Now, passing to Table 11, if you please, Mr. Otterback, what have you undertaken to show in that table?

A. Table 11 shows by types for each of the years from 1930 to 1938, inclusive, the number of steam locomotives equipped with boosters.

Q. And the device known as the booster has also been described in the Russell testimony?

A. That is correct.

Q. Do you also show the relationship between the number of locomotives equipped with boosters and the total number of locomotives by types?

A. That relationship is shown in Section 12 of Exhibit No. 36; that section showing that between 1930 and 1938 the relationship of steam locomotives equipped with boosters to total steam locomotives has increased from 9.3% to 11.2% in the case of freight locomotives; has increased from 6.7% to 9.8% in the case of passenger locomotives; has increased from 9.8% to 12.7% in the case of freight or passenger locomotives; has remained unchanged at 0.2% [fol. 605] in the case of switching locomotives; again relatively few of which are equipped with boosters; and has increased from 7.1% to 9.1% in the case of all locomotives.

Q. Now, finally, what do you show in Table No. 13?

A. Table 13 shows again for each of the years from 1930 through 1938, figures of average tractive power per booster by type of locomotives.

Q. That indicates that the tractive power of the booster attached to the various types remains on the average fairly constant.

A. There has been relatively very little change.

Q. Is that all you have on exhibit 36, Mr. Otterback?

A. This exhibit, as did the previous exhibits, reflects a growing proportion in recent years of steam locomotives equipped with various mechanical devices designed to increase their efficiency and economy of operation.

Q. Have you before you now a table consisting of one sheet beside the title page, designated as follows: "Number of Freight-Carrying cars for which Capacity was Reported, Aggregate Car Capacity Reported, Aggregate Car Capacity Reported, and Average Capacity per Freight-Carrying Car, all Railways, United States, 1903-1910, Class [fol. 606] One Railways, United States, 1911-1939"?

Mr. Mason: May we have the statement just referred to marked?

The Clerk: Defendant's Exhibit 37 for identification.

Mr. Mason: Q. Was statement No. 37 prepared in substantially the same manner as Exhibit 33?

A. In identically the same manner.

Q. And from the same basic sources?

A. That is correct.

Q. The computation in the percentage columns, are those you know?

A. They are my own, yes.

Q. The other figures appearing on the exhibit in the number column, the aggregate column, and the average column, are those taken directly from the original sources?

A. Those are taken directly, for the years 1903 to 1938, inclusive, from the Interstate Commerce Commission's Statistics of Railways in the United States and for 1939 from the Commission's preliminary abstract of Railways Statistics.

Q. Has the exhibit been checked against the original sources?

A. Yes, sir, it has.

Q. Have the computations been checked?

[fol. 607] A. They have.

Q. Will you say whether it is true and correct to the best of your knowledge?

A. To the best of my knowledge I believe it is true and correct.

Mr. Mason: Subject to the objection previously expressed and also to Mr. Strouss' waiver of the production of the publication, Statistics of Railways and so forth, for the years 1911 and 1922, exclusive—

The Witness: 1911 and 1921, inclusive.

Mr. Mason: 1911 to 1921, inclusive. Is that right, Mr. Strouss?

Mr. Strouss: It would be from 1903 to 1911.

Mr. Mason: I think the figures prior to 1910 are available. We offer the statement as No. 37.

Mr. Strouss: Q. What do you mean by "average capacity," as reported?

A. That statement parallels, Mr. Strouss, in the period of years covered and in the classes of railways covered, Exhibit 23 previously presented with reference to locomotives and to locomotive tractive power. As was true in the case of locomotives for which in earlier years tractive power was not reported for a few individual locomotives, similarly in the earlier years capacity was not reported for a few [fol. 608] freight cars.

Mr. Strouss: I probably asked a question you intended to ask.

Mr. Mason: I did intend to. I think that is all right.

Q. The complete figures for all cars have been reported for same time, have they not?

A. Yes, in recent years these figures are identical with those figures, appearing in Exhibit 32, which show the total figures of car ownership.

The Court: Subject to the usual objections, which are overruled, the exhibit may be introduced in evidence; it may be admitted in evidence.

The Clerk: Defendant's Exhibit 37 in evidence.

Mr. Mason: Q. Have you any particular further comment upon No. 37, any feature of the exhibit to which you wish to direct special attention?

A. The third column of exhibit No. 37, under the heading "Average Capacity" shows that the capacity of the average freight car has increased from 29.4 tons in 1903, to 49.7 tons in 1939, an increase—1939 over 1903, of 69%, reflecting again as in the case of locomotives, a constant and substantial trend toward the greater performance ability of the individual equipment unit.

Q. Now, these figures in the right-hand column; "percentage increase over the previous year," relate only to the average capacity?

A. They relate only to the figures of average capacity.

Q. Not to the number of cars or the total capacity of all cars?

A. Only to the average capacity.

The Court: Mr. Otterback, do I understand this exhibit to disclose that there are practically the same number of freight cars as of 1939 as there were in 1903, no substantial increase.

A. There has been no substantial change, a change of something less than six hundred in the number of cars, that is, for which capacity was reported.

Mr. Mason: Q. Now, as I look, Mr. Otterback, it appears to me that the aggregate capacity of the cars of the Class One carriers as of the end of the year 1939, was slightly greater than in the year 1912 when there were half a million more cars, is that correct?

A. That is correct.

Q. Have you made any comparison as between the cars of 1939 and the cars of previous years, as you did in the case of locomotives?

A. Yes, sir.

[fol. 610] Q. How many cars of the average capacity, — well, 1912, for example, would be required to be used, if they were to be used, instead of ten cars of the year 1939?

A. Ten cars of the year 1939 in terms of average capacity are the equivalent of approximately thirteen cars of 1912.

Q. Have you made any comparison, a similar comparison between the cars of 1939 and the cars of 1903?

A. Ten cars of the average capacity of 1939 have the equivalent in that regard of seventeen cars of average capacity of 1903.

Q. Anything further on No. 37, Mr. Otterback?

A. I think that is all.

[fol. 611] Mr. Mason:

Q. Have you before you a statement of two sheets in addition to the cover sheet entitled "Total Freight-Train Cars, Steel Freight-Train Cars, Steel Underframe Freight-Train Cars and Other Freight-Train Cars, Caboose Cars Excluded Class I Railways, United States."

A. Yes, sir.

Mr. Mason: We ask that the statement just referred to be marked No. 38.

The Clerk: Thirty-eight for identification.

Mr. Mason:

Q. The sources of this exhibit are shown on the first sheet, are they?

A. The figures shown on the first sheet of this exhibit were all taken from the Interstate Commerce Commission official published reports, Statistics of Railways in the United States.

Q. Those particular reports from and after the year 1922 are now available in the courtroom?

A. Yes, sir.

Q. The showing on the second sheet is a calculation from the showing on the first sheet?

A. Yes, sir.

Q. The figures on the first sheet are reproduced exactly from the underlying sources?

A. They are.

Q. Has the exhibit been compared and checked against [fol. 612] the underlying sources to determine whether these are a correct statement of those figures.

A. Yes, sir.

Q. Have the computations on the second sheet been checked.

A. They have.

Q. Was all this done by you personally or under your direction?

A. It was done by me personally.

Q. Will you state whether or not the exhibit is true and correct to the best of your knowledge.

A. To the best of my knowledge and belief it is true and correct.

Q. This exhibit throughout relates entirely to Class I railways, does it?

A. Yes, sir.

Mr. Mason: Subject to the usual objection, Your Honor, and also to Mr. Strouss' previously expressed waiver of the production of the annual volumes for the years prior to the year 1922, we offer the exhibit as No. 38.

The Court: It may be admitted.

The document was received in evidence and marked defendant's exhibit No. 38.

Mr. Mason:

Q. Will you take up initially the first sheet of the exhibit and point to any portions thereof that you desire to [fol. 613] call to special attention.

A. The first sheet of exhibit No. 38 shows that between June 30, 1915, and December 31, 1938, the following changes have occurred in the various construction types of freight train cars of Class I railways in the United States as a whole. The total number of such cars has declined from 2,258,855 to 1,699,689; the number of steel cars has increased from 501,309 to 891,498; the number of steel underframe cars has increased from 676,176 to 730,218; the number of steel and steel underframe cars combined, being a total of the two preceding columns, has increased from

1,177,485 to 1,621,716 and the total number of all other cars has declined from 1,081,370 to 77,973.

Q. I notice also that the number of steel underframe cars as distinguished from steel cars appears to have increased from the 1915 figure up to about the year 1930, since which time there has been a decline in the number of steel underframe cars accompanied as the exhibit indicates by a contemporaneous increase with some interruptions in the number of steel cars.

A. That is correct. There have been two distinct trends over this period in the ownership of steel underframe cars. [fol. 614] The number of steel underframe cars increased steadily from 676,176 in the year ending June 30, 1915, to a peak of 1,118,257 cars in the year ending December 31, 1930, after which there was a steady decline to 730,218 cars in the year ending December 31, 1938.

Q. Does the fact of the increase and the subsequent decline following 1930 coupled with the increase in the number of steel cars bear any significance?

A. The significance is that up to 1930 steel and steel underframe cars were replacing cars of other construction while since 1930 the tendency has further developed to replace even steel underframe cars with steel cars.

Q. You speak of other cars in the exhibit. What is the principal type of construction characteristic of these so-called "other cars"?

A. These "other cars" include of course all freight train cars on the Class I railroads other than those of steel and steel underframe construction. They include such cars as wooden cars with continuous metal center-sill construction; wood cars of not less than certain specified continuous metal center-sills; and wood cars of not less than certain specified continuous metal draft.

[fol. 615] Q. Are those the cars referred to in a rather general term as "wooden cars"?

A. Yes, sir.

Q. Will you pass to sheet 2, the tabulation on sheet 2 of the exhibit?

A. Sheet 2 of exhibit No. 38 shows by years from 1915 through 1938 the percentage relationship to total freight train cars, of steel cars, steel underframe cars, steel and steel underframe cars combined, and all other cars, percentages having changed between 1915 and 1938 in the following manner: the percentage of steel cars has in-

increased from 22.2 per cent to 52.5 per cent; steel underframe cars have increased from 29.9 per cent to 43.0 per cent; steel and steel underframe cars combined have increased from 52.1 per cent to 95.5 per cent, and other cars have declined from 47.9 per cent to 4.5 per cent.

Q. Does that conclude your comments on No. 38?

A. There is one further comment I would like to make. Both the actual figures appearing on the first page of this exhibit and the percentage figures appearing on the second page show that in addition to the increases in average freight car capacity previously discussed, that marked improvement has been made in the prevailing types of freight [fol. 616] car construction.

Mr. Strouss: May I ask a question before you leave this exhibit?

Mr. Mason: Yes.

Mr. Strouss: Does this exhibit include all cars that are owned or just cars that are in service during the particular years?

A. The Interstate Commerce Commission figures show cars in the service of the railways; that means in effect all cars owned or leased by the railways, whether they were in actual operation on that date or not. There is a distinction made between "in service" and "in the service of."

Mr. Strouss: This means all cars "in the service of"?

A. That is correct.

Mr. Booth: Would it include these refrigerator cars that have been mentioned here and belonging to the P. F. E. and Fruit Growers Express and so on?

A. No, sir, it would not.

Mr. Mason:

Q. Do you have before you a statement of one sheet in addition to the cover page entitled "Freight Operating Revenues, Freight Operating Expenses and Freight Operating Ratio, Class I Railways, United States"?

A. Yes, sir.

[fol. 617] Mr. Mason: May we have the statement just referred to marked No. 39 for identification?

The Clerk: Defendant's exhibit No. 39 for identification.

Mr. Mason:

Q. Will you state the sources from which this exhibit was taken?

A. The figures in the first two columns of the upper section of exhibit No. 39 under the column headings "Freight operating revenues" and "Freight operating expenses" as well as the figures appearing in the first two columns of the lower section of the exhibit under the column headings "Revenue per ton-mile" and "Revenue ton-miles" were all taken for each of the years from 1921 to 1938 inclusive from the official published reports of the Interstate Commerce Commission entitled "Statistics of Railways in the United States." The corresponding figures for the years 1939 were taken from the Interstate Commerce Commission's Preliminary Abstract of Railway Statistics. The figures appearing in the third column of the upper section under the heading "Freight operating ratio" and the figures appearing in the last two columns of the lower section under the headings "Adjusted freight operating revenues" and "Adjusted freight operating ratio" were all calculated from the basic figures appearing in the other [fol. 618] columns.

Q. I understand that the underlying sources, with the exception of the publication "Statistics of Railways in the United States" for the calendar year 1939 are available in the courtroom?

A. That is correct.

Q. Did you make these calculations yourself?

A. Yes, sir, I did.

Q. The other figures, did you transcribe those from the original sources?

A. I did.

Q. Have you checked the exhibit to determine its correctness?

A. I have.

Q. Have you checked the computations?

A. Yes, sir.

Q. Will you state whether or not the exhibit is true and correct to the best of your knowledge and belief?

A. To the best of my knowledge and belief it is true and correct.

Mr. Mason: Have you any questions, Mr. Strouss?

Mr. Strouss: No.

Mr. Mason: Subject to the waiver of the year 1921 and the current objections we offer the exhibit in evidence as [fol. 619] exhibit No. 39.

The Court: It may be admitted.

The document referred to was received in evidence and marked defendant's exhibit No. 39.

Mr. Mason:

Q. Will you explain the term "Freight operating ratio" as you have used it in the upper section of the exhibit?

A. The term "Freight operating ratio" means the percentage relationship of freight operating expenses to freight operating revenues or in other words the number of cents out of each dollar of freight operating revenues which are required to pay freight operating expenses.

Q. Is the so-called "operating ratio" a rather common statistical term in the railroad industry?

A. It is a standard statistical term or measure in the railroad industry.

Q. Addressing yourself to the first section of the exhibit, will you call attention to any figures there which you desire to emphasize?

A. The last column in the upper section of exhibit No. 39 shows that the freight operating ratio of the Class I railways in the United States as a whole has been reduced from 84.3 per cent in the calendar year 1921 to 65.9 per cent in the calendar year 1939. In other words, in 1921 freight [fol. 620] operating expenses consumed 84.3 cents of each dollar of freight operating revenues which these railways received. In 1939 freight operating expenses consumed 65.9 cents of each dollar of freight operating revenues.

Q. Does this reduction in the freight operating ratio as indicated in the upper section of the exhibit take into account any fluctuation upward or downward in the rate level?

A. Yes, sir, those are actual figures based upon the actual results of operation.

Q. And not adjusted for any variations in rate level?

A. No adjustment whatsoever has been made in those figures.

Q. Is there a manner of determining the average level of rates by reference to revenue and service performance?

A. The figures of average revenue per ton-mile are generally accepted as the standard comparative measure of the level of railway rates.

Q. You have shown it here in the lower section of the exhibit?

A. Those figures are shown in the first column of the lower section of exhibit No. 39 and show that average revenue per ton-mile has declined from 12.75 mills in 1921 [fol. 621] to 9.73 mills in 1939, a reduction of 23.7 per cent.

Q. Does that figure of revenue per ton-mile mean that the public or patrons of the railroads paid 12.75 mills per ton-mile for their freight service in 1921 on the average?

A. On the average, that is correct.

Q. And less than a cent or 9.73 mills on the average for their freight service in 1939?

A. Yes, that is correct.

Q. Will you explain the purpose and result of your computations in the lower section of the exhibit and particularly the two columns to the right?

A. The reduction in the freight operating ratio from 84.3 per cent in 1921 to 65.9 per cent in 1939 shown in the last column of the upper section of exhibit No. 39 has been made in the face of a practically steadily declining average revenue per ton-mile. The figures in the next to the last column in the lower section of exhibit No. 39 under the column heading "Adjusted freight operating revenues" represent a computation designed to offset these reductions which have actually occurred in revenue per ton-mile. In other words, the figures in that column have been calculated by applying to the figures of revenue ton mileage actually handled in each of the years from 1922 to 1939 inclusive the average revenue per ton-mile actually in effect in that year, 1921, to produce, in effect under the volume of traffic actually moved in the period 1922 to 1939, the freight operating revenues which would have been received by the railways had there been no reduction in the 1921 average revenue per ton-mile. Based upon these adjusted freight operating revenues the adjusted freight operating ratio has been reduced from 84.3 per cent in 1921 to 50.4 per cent in 1939.

Q. To get that figure of 50.4 per cent for the year 1939 as the adjusted freight operating ratio for that year you simply divide the freight operating expenses of the year 1939, two billion, one hundred forty-two million dollars

plus, by the adjusted freight operating revenue for the year 1939, four billion, two hundred fifty-one million dollars plus.

A. That is correct. The figure of 50.4 is the quotient obtained by the use of the figure 2,142,000,000 as the dividend and the figure of 4,251,000,000 as the divisor.

Q. In your experience as a statistician and analyst of [fol. 623] railway reports and railway accounts, Mr. Otterback, will you say whether or not the operating ratio is one of the indexes of relative efficiency?

A. It is considered as one of the primary indices of efficiency of operation.

Q. Which is the more efficient operation, one which produces a high operating ratio expressed in per cent or a low operating ratio expressed in per cent?

A. The lower the better.

Mr. Mason: We are about to pass to another exhibit, Your Honor.

The Court: We will take a short recess at this time.

Thereupon a short recess was taken after which proceedings were resumed as follows:

Mr. Mason: Mr. Otterback, I wish you would turn back to exhibit No. 38. I think you stated that these figures were taken directly from the Commission's publication referred to on the face of the exhibit?

A. Yes, I wish to make a correction in that regard. The figures of total cars, all steel cars and steel underframe cars appearing in the first three columns of exhibit No. 38 [fol. 624] were taken from the published report of the Interstate Commerce Commission. The figures in the fourth column under the heading "Steel and steel underframe cars" represent the sum for each year of the two preceding columns while the figures in the fifth and final column under the heading "Other cars" represent a subtraction of steel and steel underframe cars from total cars. In other words, the basic figures were taken from the reports of the Interstate Commerce Commission but subsequent computations were made from these basic figures.

Q. I call your attention to a statement consisting of the cover page and 34 other sheets bearing the title "Steam Locomotives Ordered, 1925-1939, Railways Reporting De-

tails to Railway Age." Have you that statement before you?

A. I have, yes, sir.

Mr. Mason: May we have the statement which was just referred to marked defendant's exhibit No. 40 for identification.

The Clerk: Defendant's exhibit No. 40 for identification.

Mr. Mason:

Q. Will you state the sources of this exhibit—first of all, is this an arrangement of certain information by calendar years from 1939 back to 1925?

[fol. 625] A. It is, yes sir.

Q. And the information for each calendar year is separately shown under the heading for that year, is it?

A. Shown separately for each calendar year under the heading for that year and is also shown in detail for various types of locomotives.

Q. After the showing for each calendar year you have certain summaries in the concluding figures of the exhibit, have you not?

A. That is correct.

Q. Commencing on page 27?

A. Commencing, I think, on page 29.

Q. Yes, that is correct. The summaries being based entirely on the information shown in detail on the preceding pages?

A. That is correct.

Q. From what source was the underlying information shown on the pages preceding the summary taken?

A. The basic information contained in Exhibit No. 40 was taken from the annual review issues of the Railway Age.

Q. What is the Railway Age?

A. The Railway Age is a standard trade paper of the railroad industry. It was founded in 1856 and has maintained continuous publication for the past 84 years since [fol. 626] that date.

Q. Is it the recognized authority in the railroad transportation field?

A. It is generally recognized and accepted as an authority in the transportation field.

Q. Does it publish an annual statistical number?

A. In the early part of each year, quite often the first issue of each year, there is published what is termed "An Annual Statistical or Annual Review Issue" in which are contained various figures reviewing the details of railway operations in preceding year. Among the details contained in such annual statistical issue are details of locomotive orders and of freight car orders placed in the preceding calendar year.

Q. Were these details taken from the annual statistical numbers of the Railway Age?

A. Yes, sir.

Q. Have you available the issue of the Railway Age from which you have taken the information here shown?

A. Such issues are available for the period from 1925 through 1940, inclusive, with the exception of a single year, 1926.

Q. Where did you obtain the issues for the years 1927 to [fol. 627] 1939, inclusive, somewhere in the City of Tucson?

A. They were obtained from the Library of the University of Arizona.

Q. Are those counterparts of the issues in your own possession and from which you prepared the exhibit?

A. Yes, sir.

Q. Do you maintain the Railway Age in bound volumes as a source of statistical material in your office?

A. Yes, sir.

Q. Have you a separate copy of the statistical issue of the Railway Age which you can produce for illustrative purposes?

A. Yes sir, this is or was the current issue at the time I left Chicago.

Mr. Mason: I now produce for the examination of your honor and of counsel the issues of January 7, 1939 and January 6, 1940 which bear at the top of the outside cover the designation, "Annual Statistical and Outlook Number," handing your honor the issue for January 6, 1940 and to Mr. Strouss the issue of January 7, 1939. May the record show we have produced here in court on the counsel table the bound volume of the Railway Age for the year 1939, cov-[fol. 628] ering the months from January to June, inclusive, the other bound volumes for the first half of each of the years are likewise available in the courtroom here.

Q. Will you state whether the statement No. 40, as to the information shown therein, has been checked against the issues of the Railway Age from which the information is taken to determine whether it is true and correct?

A. It has.

Q. Have the computations and summaries, are those of your own compilation and making?

A. Yes, sir.

Q. And, predicated upon other information appearing in the exhibit which you have taken from the Railway Age?

A. They summarize the basic information appearing in the exhibit taken as stated from Railway Age.

Q. Have you checked the information against the underlying sources to determine its correctness?

A. Yes, sir.

Q. Is it true and correct, to the best of your knowledge?

A. To the best of my knowledge and belief, it is true and correct.

Q. Have you checked the computation to determine [fol. 629] whether they correctly reflect or correspond to the underlying information upon which they are based?

A. I have.

Q. Are they true and correct?

A. To the best of my knowledge and belief.

Mr. Mason: Have you any questions prior to the offer of the exhibit, Mr. Strouss?

Mr. Strouss: I have no questions.

Mr. Mason: We offer the exhibit as No. 40.

Mr. Strouss: I have my usual objection and, of course, point out that here the so-called basic records are themselves hearsay and secondary evidence.

Mr. Mason: Your honor, we feel that while this is, of course—this publication probably does not rise to the dignity of an official report issued by the Interstate Commerce Commission, it occupies a place in the law of evidence somewhat similar to a recognized publication of authoritative standing, as for example the Wall Street Journal would be upon the current prices on a particular day upon stocks and bonds. I am sure that your honor is familiar with the instances in which reliance upon that or a similar publication has been had for information of that kind which is currently [fol. 630] published. It is in a sense hearsay and yet is an official standard publication of that character for informa-

tion which is peculiarly within its province to know and compile and has been generally recognized by the courts. I have no authorities at hand to support my statement, but I know that is generally recognized as the rule. If there be any doubt in your honor's mind as to the proper rule to be applied, the ruling might be reserved and the offer held so to speak, in suspense.

The Court: Well, there is a doubt, gentlemen. Of course, as Mr. Strouss points out this is going one step further. Here is data that this publication compiles and publishes and the witness offers a summary of the information contained therein. I will reserve ruling upon it.

Mr. Mason: I want to point out that the witness has not attempted to summarize what appears in the publication, but summarize what he has taken out of there by addition or subtraction or classification of information which anyone could make from the face of the exhibit.

The Court: This is a rather new field of evidence to me and if counsel could produce, say next week, some authority [fol. 631] on this, I would feel a little safer.

Mr. Mason: We will undertake to investigate the authorities as to this particular field and either continue the offer or perhaps withdraw it.

Mr. Booth: To be perfectly frank about it, I made an effort to do so, your honor, in a rather hasty and somewhat limited excursion into the library and the closest I found to it were some cases bearing on the Wall Street Journal, but in further frankness I would say the distinction between the Wall Street Journal is that the Wall Street Journal is a record of actual sales and this is a record of actual contracts made for the acquisition of equipment, that is, a report from contracts made for the buying of equipment. To that extent the cases may be distinguished, cases of sales on the market of wheat, for instance, you have an action for damage to freight shipment of cantaloupes pending, and you can show by market quotations published in standard journals to which cantaloupe shippers and growers and jobbers resort to as to what cantaloupes were selling for on the market at that time, but that is not exactly the same as though you produced a statement of orders for cantaloupes, firm orders or contracts to buy and payable in the future.

[fol. 632] The Court: I will tentatively sustain the objection and reserve final ruling on it until you can submit some authority.

Mr. Mason:

Q. Mr. Otterback, will you refer please to a statement bearing the title, "Freight-Carrying Cars Ordered, 1922-1939, Railways Reporting Details to Railway Age," consisting of cover sheet and 32 other pages. Have you that before you?

A. Yes, sir.

Mr. Mason: May we have the statement marked Exhibit No. 41 for identification?

The Clerk: Defendant's Exhibit No. 41 for identification.

Mr. Mason:

Q. Without going into any extensive detail as to the exhibit, is the statement No. 41 similar in its make-up to the statement marked No. 40?

A. It was compiled in a similar manner and from the same source.

Q. The source material, except as to the years prior to 1925 and the single year 1926, is available in the court room.

A. That is correct.

The Court: The court will make the same ruling.

Mr. Mason: I would make the same offer and ask that the ruling be the same, simply that the matter may be before [fol. 633] the court.

The Court: All right.

Mr. Mason: I assume that you have the same objection, Mr. Strouss?

Mr. Strouss: Yes.
[fol. 634] Mr. Mason: Do you wish to go ahead with cross examination now, Mr. Strouss. That is all we have at this time of the witness.

Mr. Strouss: I would really prefer to defer cross examination. I presume I could ask a few questions. He is to be back for further discussion of these exhibits, if they are admitted in evidence.

Mr. Mason: I am willing that the Court take more time in ruling upon the admissibility of these exhibits. Of course, if they are admitted they will take some explanation from this witness. But if you are able to go ahead at this time, we will appreciate it; but I don't mean to force you to cross examine.

Mr. Strouss: I have one or two general questions that I want to ask; I can ask those. I of course would want to look the exhibits over a little before I completed my cross examination.

Mr. Strouss:

Q. I really only have one question I will ask. The statistics which are covered by your exhibits, Mr. Otterback, cover all operations of class I railways for the different years shown in the different exhibits?

A. I don't quite understand what you mean.

Q. They are not limited to main lines or anything of that [fol. 635] sort?

A. No, the equipment figures of the systems are for the entire road; the revenues, the expenses and the average revenue per ton miles are all figures for the entire roads of the systems. Not just for main line operations.

Mr. Strouss: That is the only question I wanted to ask at this time.

The Court: You may step aside. Call your next witness.

Mr. Strouss: I am going home tonight, and I am not very anxious to proceed further.

Mr. Mason: I, too am leaving tonight.

The Court: I am willing to work until 4: o'clock. You may call your next witness.

Thereupon Mr. C. L. LaFountaine was called as a witness on behalf of the Defendant, and being first duly sworn, testified as follows:

Direct examination.

By Mr. Mason:

Q. Will you please state your residence or special headquarters of your employment, Mr. LaFountaine?

A. I am General Safety Supervisor for the Great Northern Railway Company, with headquarters at St. Paul, Minnesota.

Q. Does your jurisdiction extend over the entire system [fol. 636] of the Great Northern?

A. Yes, sir.

Q. Will you state the approximate mileage of the Great Northern railroad?

A. Eight Thousand miles plus; 8,070.

Q. Generally speaking, from and to what cities does it extend?

A. East and west from St. Paul to Seattle, Washington.

Q. And has lines extending to Portland, Oregon and to Northern California?

A. Yes, sir.

Q. And also reaches the edge of Lake Superior at Duluth?

A. Yes, sir.

Q. And has short lines extending into the Dominion of Canada at Winnipeg and Vancouver, British Columbia?

A. Yes, sir.

Q. In what states does the Great Northern operate?

A. Wisconsin, Minnesota, South Dakota, Iowa, North Dakota, Montana, Idaho, Washington, Oregon, and California.

Q. Have you a sheet before you containing an outline map of the Great Northern System?

[fol. 637] A. Yes sir.

Mr. Mason: May we ask that the map which has been distributed be marked as Defendant's Exhibit No. 42 for identification.

The Clerk: Defendant's Exhibit No. 42, marked for identification.

Mr. Mason:

Q. Addressing yourself to the map, Defendant's Exhibit No. 42, for identification, is that a reasonably accurate outline map of the extent of the Great Northern System, and the showing of the states in which it operates?

A. Yes sir.

Q. And the heavy black portions of the lines are to be explained later, are they?

A. That is correct.

Mr. Mason: We offer the exhibit in evidence as Defendant's No. 42.

Mr. Strouss: Same objections.

The Court: Objections overruled. It may be admitted.

The Clerk: Defendant's Exhibit No. 42 in evidence.

Mr. Mason:

Q. Now, I want you to refer to the dashed line extending from Spokane along the southern border of Washington to a point just north of Portland, Oregon, and bearing the designation "S. P. & S.", is that a railroad line?

[fol. 638] A. Yes sir.

Q. What railroad is that?

A. Spokane, Portland and Seattle.

Q. Is that a line affiliated with the Great Northern?

A. Yes sir.

Q. I notice another line extending from about the center of the Southern boundary of the State of Washington, down to Bend, Oregon, bearing the designation "O. T. Ry", what railroad is that?

A. It is the Oregon Trunk Railroad.

Q. Is that affiliated with the Great Northern?

A. It is affiliated with the S. P. & S., which is affiliated with the Great Northern.

Q. And that line between Bend and Beiber, Bend, Oregon, and Beiber, California, is a line of the Great Northern?

A. Yes.

Q. Between Chemult and Klamath Falls you operate by trackage rights over the Southern Pacific lines.

A. That is correct.

Q. When did you start your railroad career with the Great Northern, Mr. LaFontaine?

A. July, 1904.

Q. In what capacity?

[fol. 639] A. As a train brakeman.

Q. Were you afterwards promoted to Conductor?

A. Yes, I was promoted to Conductor in August, 1906.

Q. Did you serve on freight trains as a freight train brakeman?

A. Yes sir.

Q. And conductor?

A. Yes sir.

Q. Were you promoted from freight-train Conductor?

A. Yes sir.

Q. At what time?

A. January 1, 1918 to Train Master at Sioux City, Iowa.

Q. Did you serve also as Yard Master?

A. Yes sir, I did during the time I was trainman.

Q. Between the time you were a Brakeman and Conductor?

A. Yes.

Q. What was your next position after being Train Master?

A. On June 25, 1918, I was promoted to my present position, General Supervisor of Safety.

Q. And you have occupied that position since?

[fol. 640] A. I have constantly, with the exception of seven and one-half months during the summer of 1936, when I was back in train service.

Q. In what capacity?

A. Conductor.

Q. Where did you perform your services as a brakeman and conductor? What part of the system, as shown on the map, Exhibit No. 42?

A. Employed at Breckenridge, 214 miles west of St. Paul, Minnesota; we then held rights from Willmar, Minnesota, 102 miles west of St. Paul to Larimore, North Dakota.

Q. So that your operations as a trainman and conductor, your service was in the states of North Dakota and the central part of Minnesota?

A. That was where I held my rights, but in those years we were directed and went most any place on the railroad.

Q. You still retain your seniority as brakeman and conductor, do you?

A. Yes.

Q. Now, I understand you are a general officer of the system?

A. Yes, sir.

Q. Do you, in the course of your duties, travel over the entire system?

[fol. 641] A. Yes, I do.

Q. What means of transportation do you use?

A. I ride passenger trains generally. I do ride freight trains to some extent, and also cover the line by motor car.

Q. By motor car, do you mean a track motor car?

A. Yes a track motor car, or rail car.

Q. When you ride a freight train do you ride in the caboose?

A. Generally, but occasionally in the engine.

Q. Have you covered the entire system by freight or passenger trains, or track motor cars in recent years?

A. Frequently. A number of times each year. I might omit some of the branch lines.

Q. You particularly cover the main lines?

A. Yes sir.

Q. Do you also in the course of your duties make visits to the various yards?

A. Yes sir. That is directly in line with my duties.

Q. Do you visit the shops?

A. Yes, we hold meetings regularly every sixty days, which I attend and conduct.

Q. Do you make inspection of the shops?

[fol. 642] A. Yes, sir.

Q. Do you make inspection of the equipment, both locomotive and car equipment, in the course of your duties?

A. Yes, I do. Particularly in connection with safety matters.

Q. Do you know anything of the operating code of rules, under which your company operates?

A. Yes, I do. I helped to make them. I have been in charge of the examining board since 1927.

Q. Are you acquainted with the so-called "Standard Code of Rules in America, Association of Railways?"

A. Yes, sir.

Q. Will you say whether or not the Great Northern Rules correspond, or are similar to the Standard Code?

A. Yes, they are based on the Standard Code and use practically all of the Standard Code rules, but have additional rules to fit our own physical conditions.

Q. Does the Great Northern have any block signals on its main lines?

A. Yes, the main line from St. Paul to Seattle is all block signals.

[fol. 643] Q. Is there any double track in that territory?

A. Yes. We have on that line shown from St. Paul to Seattle 318 miles of double track at various locations, and for a short piece out of each division point. And on the mountain territories we have some more extensive lengths.

Q. Is it correct to say that the Great Northern is largely a single-track railroad, with relatively few short stretches of double track?

A. That is correct.

Q. You spoke of mountains, does your main line cross a number of mountains, or mountain ranges in the States of Montana, Idaho and Washington?

A. Yes, it crosses the Rocky mountain range in Montana and the Cascade Mountain range in Washington.

Q. Is there any of this territory in the mountains where you employ more than one locomotive for the purpose of handling trains which are elsewhere handled with a single engine?

A. Yes, sir.

Q. You designate those as "Helpers" do you not?

A. We do.

Q. Besides crossing mountainous territory does your [fol. 644] line extend for considerable distances across plains territory?

A. Yes, two lines across the plains.

Q. Is that North Dakota and Eastern Montana?

A. The one line starts at Minot, North Dakota, that would be the western part of North Dakota, and extends eastward through Bedford and Fargo, North Dakota, and on to Minneapolis. The other line from Minot to the head of the lake at Duluth, known as our wheat line.

Q. And you have an alternate line from Minot to Fargo and Breckenridge and on to St. Paul?

A. Yes.

Q. The map indicates a number of lines extending northward from Grand Forks to Minot and on west from Minot; what purpose do those lines serve?

A. Those lines serve as feeder lines to take care of the territory north of our main line.

Q. Is that territory in which grain and livestock are particularly produced?

A. Yes, that is a grain country, and quite a lot of livestock developing there now.

Q. Is there any portion of the territory along your main line where the population is comparatively sparse?

[fol. 645] A. Yes, the entire state of North Dakota and Montana.

Q. Are there any large cities upon your main line across Montana?

A. No, there is not.

Mr. Macon: This is an appropriate point to suspend, your Honor.

The Court: It is my understanding that next week, and from now on until different arrangements are made, that we will start Tuesday morning and work through until Friday night.

Mr. Mason: That is my understanding.

Mr. Strouss: Yes, that is right.

The Court: The Court will be at recess until Tuesday morning at 10:00 o'clock.

[fol. 646]

10 A. M., December 3, 1940.

All parties being present as heretofore noted, proceedings were resumed as follows:

The Court: What witness was on the stand?

Mr. Mason: Mr. LaFountaine was on the stand.

The Court: You may resume the witness stand. You may proceed.

C. L. LaFountaine resumed the witness stand for further

Direct Examination (Continued).

Mr. Mason:

Q. Mr. LaFountaine, I think in qualifying you I did not ask you to describe in detail your duties as general superintendent of safety, supervisor of safety I believe it is called, for the Great Northern. Will you describe those duties a little more in detail for the record?

A. My duties are principally in connection with accident prevention and in order to prevent accidents one must necessarily know the cause. I receive wire reports of all accidents regardless of whether there are personal injuries involved or not and then follow-up reports, superintendents hold formal investigations which I receive copies of, together with the superintendent's write-up expressing his opinion as to the cause and responsibility and disciplinary action recommended.

Q. Do you yourself participate in investigations of serious accidents?

A. Yes, I am instructed to attend a number of investigations, participate in them and that is without regard to whether there are personal injuries involved or not. Just

recently I was instructed to be present at an investigation where there was a serious delay to a train, no injury or accident otherwise. I report to the operating vice-president and I have special duties assigned to me as the circumstances arise. I have charge of standard time on our railroad. As I said in my formal investigation I am in charge of the examining board of transportation rules.

Q. You are a member of the staff of the operating vice-president and thus in the operating department, are you?

A. That is correct, yes, sir.

Q. Have you ever served on any committees of the Association of American Railroads having to do with safety matters?

A. Yes, sir, I have served on nearly all of them, served as second vice-chairman, first vice-chairman and Chairman [fol. 648] of the section and during my twenty-two years I think I have been a member of every committee. I am a member of the rules committee at the present time.

Q. When you speak of the section you mean the safety section of the A. A. R.?

A. That is correct, yes, sir.

Q. I think you have stated that you have ridden over the line frequently in the course of each year during your occupancy of your present position. Will you say whether or not you have become familiar with the grades and particularly the ruling grades upon the various portions of the line?

A. Yes, I have.

Q. Does the Great Northern handle various kinds of freight traffic?

A. Yes, sir.

Q. It is not particularly devoted to the handling of one single type of commodity, is it?

A. No, sir.

Q. For example, I think you spoke of serving grain territories. Do you handle a considerable volume of grain?

A. Yes, we do, out of Montana, North Dakota, South Dakota, and Iowa.

Q. Do you originate grain as well in Washington?

[fol. 649] A. Yes, we do, we have quite extensive grain territory in Washington.

Q. Is grain handled in both directions over your main line to mills and points of transfer?

A. Yes. Of course, the bulk of the grain moves east but we move some grain from the Montana country to the western mills and the Washington grain moves to the western coast.

Q. Does your company handle any substantial volume of lumber traffic?

A. Yes, our eastern freight business out of the West coast is largely lumber, from Seattle.

Mr. Strouss: If the court please, our objection is going to all of this testimony.

The Court: Yes, the objection is overruled.

Mr. Mason:

Q. Does the Great Northern handle any perishable traffic by which I mean particularly fresh fruits and vegetables?

A. Yes, we handle fresh fruit out of the Seattle territory perhaps twenty thousand carloads of apples out of the Wenatchee Valley.

Q. Is that Wenatchee Valley perishable traffic moved from Eastern Washington to your Eastern terminals?

A. Yes, the bulk of it moves from eastern Washington [fol. 650] to the Eastern terminals.

Q. Does that move in refrigerator cars?

A. Yes, sir.

Q. Do you have a particular type of refrigerator cars that you use on the Great Northern?

A. Yes, we use the W. F. E. refrigerator cars.

Q. I take it you have observed the P. F. E. refrigerator cars?

A. Yes, sir.

Q. Do they move over the Great Northern from time to time?

A. Yes, sir.

Q. Is the W. F. E. car that you just mentioned similar in general characteristics to the P. F. E. car?

A. Yes, sir.

Q. Does your company handle merchandise and manufactured products to any extent in its freight trains?

A. Yes, sir, the westbound business is largely the manufactured products.

Q. Do you have any volume of livestock movement from the agricultural territory along your lines?

A. Yes, we do, in trainload shipments out of Montana, sheep and cattle.

[fol. 651] Q. Does your company serve any districts originating ore or mineral products?

A. Yes.

Q. Will you state where those are located generally?

A. Our largest ore mines are in the Mesabi range in northern Minnesota. We have some ore movement from the Anaconda Copper Company down to the smelter at Great Falls.

Q. Does your company handle any substantial volume of dairy products?

A. I wouldn't say that they are extensive; we handle some but it is not an extensive movement.

Q. Your company has a substantial passenger traffic, does it not?

A. We have one coast train in either direction which handles a good train of passengers especially during the summer months. I wouldn't say that we are getting any more than our share of the passenger business.

Q. But you do have passenger trains regularly operating?

A. Oh, yes.

Q. Are you familiar with the equipment, that is to say the cars and engines owned and used by the Great Northern [fol. 652] A. Yes, sir.

Q. Is it part of your duty as general supervisor of safety to become familiar with such equipment?

A. Yes, it is.

Q. Have you heretofore been furnished with copies of the defendant's exhibit 2, 3, 4, 5, and 6?

A. Yes.

Q. I wish you would refer to exhibit No. 2 first, showing the chronology of the Southern Pacific Company's freight boxcars and without going into detail will you say whether from your own observation and knowledge the development of Great Northern boxcars has proceeded along the same general lines?

A. Yes; they have.

Q. Does your company now operate predominately with steel or steel underframe boxcars?

A. Yes, better than 95 per cent of our cars are steel or steel underframe construction.

Q. Looking at the passenger car exhibit which is No. 4, will you say whether from your observation and personal knowledge the development of the passenger car equipment of the Great Northern has proceeded along some [fol. 653] what the same general lines as shown on that exhibit?

A. Yes, they have, with the exception that we have no streamlined cars, articulated cars.

Q. That is the types for 1937 and 1939 shown thereon?

A. Yes.

Q. Does your company operate predominately with steel passenger train cars at present?

A. Yes, sir.

Q. Will you refer please to exhibit No. 5, the chronology of freight locomotive types of the defendant's company. Does your company have types of locomotives somewhat similar to those shown on exhibit No. 5?

A. Yes, we have locomotives similar to all the types shown on this exhibit. The Mogul engine here, there are not very many of those left.

Q. That is an older type now largely displaced, is it?

A. Yes, we have two of those left. The Consolidated 2-8-0, we have a number of those Mikado type engines.

Q. Are your Mikados in present use?

A. Yes, sir.

Q. In main line freight service?

A. Yes, sir.

[fol. 654] Q. What is their tractive effort as compared to the fifty-one thousand pounds shown here for these Mikados?

A. Our lightest Mikado engine has a tractive effort of 64,000 pounds and the heaviest one 78,000 pounds.

Q. You have a freight type similar to the 2-10-2s large shown there?

A. Yes, we have two different sizes, we call them the Santa Fe locomotives 2-10-2.

Q. Do they have greater or less tractive effort?

A. They have greater tractive effort than shown on your locomotives. The larger Santa Fe engines have a tractive effort of 87,000 pounds and there are twelve of those equipped with boosters that give them a tractive effort of 99,000 pounds.

Q. Do you have the Articulated type bearing some resemblance to the Articulated Consolidated locomotive shown on exhibit No. 5?

A. Yes, we have a number of those similar to the one shown, that AC-9.

Q. That is with the stack in front and the cab in rear?

A. That is right, but they are 2-8-8-2 locomotives.

Q. Are they coal or oil burning?

A. Both, some coal and some oil.

[fol. 655] Q. You operate with both coal and oil?

A. That is correct.

Q. What is the tractive effort of your 2-8-8-2 locomotives or do you have those by class?

A. We have those by class. The N2's have a tractive effort of 100,000 pounds; the N3, 118,000; the R1's have 127,000 pounds and 136,000, two different sizes and the R2's have a tractive effort of 146,000 pounds.

Q. Those are in use in what districts largely?

A. The N2's and N3's are largely used in the ore service on the Iron Range. The R1's, the smaller ones, are on the Minot Division; the larger R1's are on the Spokane Division, and the R2's are working between Hilliard and Havre on the Kalispell Division.

Q. The Kalispell Division is the division between Spokane, Washington, and Havre, Montana?

A. Yes.

Q. Over the Rocky Mountains and the Bitter Root Range?

A. Yes, sir.

[fol. 656] Now, will you refer to the exhibit showing the chronology of passenger locomotive types of the defendant's lines, being Exhibit No. 6. Do you have types of passenger locomotives which correspond with those shown on that exhibit?

A. Yes, we have passenger locomotives that correspond with all the numbers shown on the exhibit.

Q. Has your passenger locomotive development followed along somewhat the same lines as shown here?

A. Yes, sir.

Q. Does your company maintain schedules for the transportation of freight over its main line?

A. Yes, we do have our symbol freights.

Q. Do you have an east-bound schedule, for example, from Seattle and other Pacific coast ports to St. Paul and Minneapolis?

A. Yes, sir.

Q. What do you call that schedule?

A. Well, it is 402, a symbol schedule; 111 hours and 30 minutes, 111 hours and 30 minutes from Seattle to Minneapolis.

Q. That calls for the delivery of freight in 111 hours and 30 minutes from Seattle to arrival in Minneapolis?

A. That is correct.

Q. Do you have a west-bound schedule?

[fol. 657] A. Yes, we have a similar schedule 90 hours from Minneapolis to Seattle, or Interbay, that is four miles this side of Seattle King Street Station.

Q. Now, is perishable freight handled on this 402 symbol schedule you spoke of, the east-bound schedule?

A. Yes, all of our freight is handled on the same 402 schedule.

Q. Are manufactured products handled on that, on that west-bound numbered schedule?

A. Yes, sir.

Q. Does that have a symbol by way of number attached to it?

A. No. 401.

Q. Do I understand that the train or trains moving on the east-bound schedule are identified by symbols 402 over the entire main line?

A. That is right.

Q. Do they take actually different train number designations on various divisions?

A. No, they carry the same train number over the entire system.

Q. The west-bound train number schedule carries 401 over the entire system?

A. Yes, sir.

Q. Are you familiar from your knowledge with the extent [fol. 658] to which your company makes delivery in accordance with these schedules?

A. No I am not. May I hear that question?

Q. Do you know of your own knowledge the extent of your on-time performance measured in percentage?

A. No I do not.

Q. Does your company interchange freight with the Southern Pacific?

A. Yes we do.

Q. You have at least 2 different connections with the Southern Pacific have you not?

A. We have 3 I believe, Portland, Chemult, Klamath Falls.

Q. Referring to exhibit No. 1, the large copy of which is shown on the easel, Portland is shown at the extreme upper left-hand corner of the map?

A. Yes sir.

Q. That is one of the western termini of the Great Northern, is it, Portland?

A. Yes.

Q. And in addition to that you have the line which you have previously described extending southward into Central Oregon, which reaches the Southern Pacific at Chemult?

A. Yes.

Q. Then operates over joint trackage with the Southern [fol. 659] Pacific to Klamath Falls?

A. Yes.

Q. Your line extends southward into Northern California?

A. Yes sir, to Bieber.

Q. To a junction with the Western Pacific at Bieber?

A. Yes sir.

Q. Have you seen cars of Southern Pacific ownership move in freight trains on the Great Northern?

A. Yes sir.

Q. I will ask you Mr. La Fountaine, to refer please to a statement of one sheet bearing the title "Great Northern Railway Company Freight Trains Operated on Kalispell Division During 10-day Period August 19 to 24 inclusive, 1939." Have you that statement before you?

A. Yes sir.

Mr. Mason: May we have the exhibit marked for identification No. 43.

(Thereupon the document referred to was marked Defendant's Exhibit No. 43 for identification.)

Mr. Mason: Was exhibit No. 43 for identification prepared by you or under your direction Mr. La Fountaine?

A. Yes sir, it was.

[fol. 660] Q. From what sources was the information taken?

A. From the train sheets.

Q. Are those the designated train sheets covering the districts depicted on the Kalispel division?

A. Yes sir.

Q. Are those train sheets available now in the Court Room?

A. Yes sir they are.

Mr. Mason: Your Honor in connection with the tender of this exhibit, when it is tendered, we will also tender the despatchers train sheets mentioned by the witness for examination by opposing counsel.

Q. Have you compared the exhibit with the original source, that is to say, the train sheets, to determine whether it is a true and correct transcription, Mr. La Fountaine?

A. Yes sir.

Q. And is it true and correct?

A. To the best of my knowledge and belief.

Q. As to lines 32, 33, and 34 of the exhibit at the bottom, were those computations and additions made by yourself?

A. Yes sir.

Q. And they are a summary of the information appearing on lines 1-31 inclusive?

A. Yes sir.

[fol. 661] Q. Now, as to the column headed "Ruling Grade," being column E, I'll repeat, column E, is that information in line with your own knowledge of the district?

A. Yes sir.

Q. Will you say whether that is true and correct according to your knowledge independent of any document?

A. Yes sir.

Q. Do you have profiles furnished by the Engineering Department of the Great Northern which show the information as to Ruling Grades appearing on the exhibit?

A. Yes sir.

Mr. Mason: I may say, Your Honor, that we will likewise tender those profiles for the examination of opposing counsel.

Q. Now referring to the heading "Type of Locomotive," which appears in several columns, Columns G, U, and BB

are those the types of locomotives owned by the Great Northern which you have just discussed in connection with your reference to Defendant's exhibit No. 3, that is, the consolidation, the Mikado, and 2-8-8-2?

A. The Mikado and the 2-8-8-2 and the Pacific type as shown on your exhibit. I am not sure that that consolidation engine was shown on your exhibit, which was 2-8-0.

Q. Look at the exhibit.

A. You have a consolidation.

Q. Exhibit 5 does not show a Pacific type locomotive. Look at Exhibit 6. Does the locomotive in line 30 correspond to one of the Pacific types in No. 6?

A. Yes sir.

Q. Now, the heading of your exhibit, Mr. La Fountaine, is as to freight train operation during a 10-day period. I will ask you if the 10-day period August 19 to 24 represents the peak of traffic on the Kalispell division of the Great Northern?

A. No sir.

Q. Does it represent a period of unusually light traffic?

A. No sir.

Q. Would you say from your knowledge of the traffic of the Company whether it is a period of fairly average traffic?

A. That is my judgment, that it is an average period of traffic on our railroad, freight traffic.

Q. Are all of the trains shown on exhibit 43 for identification through trains or some of them local trains?

[fol. 663] A. No, they are both through trains and local trains.

Mr. Mason: I have further questions on the exhibit, but they necessarily should be deferred until after the exhibit is in evidence, if it be received. I am about to offer the exhibit unless you have some questions before it is offered.

Mr. Strouss: I have some questions. I haven't made any objections to the questions for the reason I have assumed my objection made heretofore is a running objection.

The Court: That is true Mr. Strouss and the Court will consider your objection to the evidence. For the first time we now have presented the original documents from which

this exhibit 43 is compiled. I wish you would re-state your objection in the light of the present record.

Mr. Strouss: Of course we have, as the Court has stated, the original records for a 10-day period but when the witness testifies concerning a typical period during the year's operation, of course, then we are going into matters which are not limited to that 10-day period, but which covers a period of a year, and of course the records of the 10-day period, doesn't give me anything to cross-examine him on with respect to that particular question. The testimony [fol. 664] as to typical operation, as to that part of the testimony at least there hasn't been any improvement here. I would like to ask the witness a question or two here at the present time.

Q. Mr. La Fontaine who prepared the original data from which this exhibit was made? Did you do that?

A. Yes sir, I aided in doing it; it was prepared in my office.

Q. The train sheets were there?

A. Yes sir.

Q. Who selected the period that would be covered by this exhibit?

A. I selected the period.

Q. How did you determine that period?

A. Well I gave it considerable consideration. Our Fall business, our grain business and apple movement is not started at this time of the year, and I thought business was better than during the slack period of May, June or April, when our business is at its lowest ebb, and after giving it some thought and from my years experience there, I figured it was a normal period of the year.

Q. Of course your movement of trains does depend to a great extent on traffic?

A. Yes sir.

[fol. 665] Q. And that, at least as to some types of traffic, is seasonal; that is true isn't it?

A. Yes sir.

Q. Your wheat movement is a seasonal movement?

A. Yes sir.

Q. How about lumber?

A. Well I wouldn't say lumber was so seasonal. That depends on how the market is and the trouble they have on the Pacific Coast.

Q. It varies?

A. Yes, that is not so seasonal, but this precedes any wheat movement in their country, which is at a peak in September, October and November, our freight operation is then much heavier than in August.

Q. Of course the apple traffic is a seasonal traffic?

A. Yes, pretty much so, although we have large storage capacity at Wenatchee now, and there will be apples moving more or less all along.

Q. You have, due to the different conditions which will govern the movement of traffic, you will have periods during the year when there is greater volume of traffic and periods when the traffic is of a lesser volume?

A. That is true.

[fol. 666] Q. And this exhibit is your opinion or judgment of what is the average day's traffic during that year?

A. Yes sir.

Mr. Strauss: Average 10-day traffic I mean.

The Court: I notice that some of the other witnesses representing other lines have apparently selected a period in April as being a normal period of operation. That is not true on your line?

A. No, I wouldn't say so, Your Honor.

Mr. Strauss: Well, our objection, is first, that it is not the best evidence, that the records themselves are the best evidence, that insofar as the testimony goes to this being a typical operation, that it is not the best evidence because the records for the whole year are not present, that the evidence, all of it calls for a conclusion of the witness, is irrelevant and immaterial because there has been no showing of similarity of conditions and is evidence with reference to operations which are without the State of Arizona and have no relevancy or materiality to the question of the operations in Arizona and the application of the Arizona Train Limit Law to those operations.

The Court: Mr. Strauss if you desire, in fairness to the State in order that you can question the judgment of [fol. 667] this witness as to what is a typical period, if you designate any particular 10-day period, I think the Court might require the defendant here to produce the records for that period.

Mr. Strouss: Of course that wouldn't mean a thing. I haven't any information as to what the witness has testified to here with respect to the traffic on the Great Northern. As the witness has testified, the question of what is a typical operation there depends upon the traffic and when the volume of traffic occurs on that railroad, when there is a lack of volume, and there is no way for me to designate any period which would mean anything if it were brought into court. It is a question of comparison of the records as a whole for the year to determine what is their average volume of traffic for the movement of trains.

The Court: The objection will be over-ruled. The exhibit may be admitted in evidence.

(Thereupon the document referred to was received in evidence and marked "Defendant's exhibit No. 43.")

The Court: While we are on this subject, if the Court might say to counsel that it seems to the Court that the rules of evidence regarding the introduction of certain of these exhibits has now in this particular instance been reasonably complied with, and I am going to, after a conference [fol. 668] once with counsel, on my own motion strike certain of these other exhibits from the record.

Mr. Booth: We intend to put Mr. C. R. Young on the witness stand, and he now has the train sheet in support of the exhibit that was submitted during his testimony, and we will have later on in the case either the train sheets or the conductor's wheel reports, which are equally original, contemporaneous records, for the Missouri Pacific and we will also supply that deficiency either by wheel reports or by train sheets in the case of the New York Central. Now, all of the witnesses from now on, there are some ten or twelve of them from other lines, will have either the train sheets or the wheel reports. When we get to the question of wheel reports, that is something that will have to be explained. The wheel reports are, in our opinion, of equal authenticity, containing all of the information necessary to make up an exhibit similar to this; so I would ask Your Honor to defer any action on these exhibits until this branch of our case is closed. It is a distinct branch of the case and we hope to finish it before the Christmas vacation and I think we can.

The Court: I just wanted counsel for the State to know [fol. 669] that after (an examination of your authorities the Court is convinced that your objection is well taken; that the summaries of records are not admissible unless the records themselves are available. In the future, the Court will adhere a little more closely to the rule of evidence announced by Wigmore, wherein he states—I am reading from Wigmore on Evidence, Page 1472, Paragraph 1130, which is quoted in probably your leading case of *Hooven v. First National Bank*; 273 Pac. 257, an Oklahoma case. In that case, quoting from Dean Wigmore, the Court says, "Most courts require, as a condition, that the mass thus summarily testified shall, if the occasion seems to require it, be placed at hand in the court or at least be made accessible to the opposing counsel in order that the material for cross-examination may be available." The Court intends to adhere to that rule.

Mr. Booth: I would like to add, if your Honor please, that while the general rule is as stated by Dean Wigmore, there are certain variations and exceptions to that rule which are applied according to the circumstances of the case and the issues to which the evidence is directed. For example, the multiplicity of records rule is used in some cases to mitigate the strictness of the rule your Honor has [fol. 670] just read, and in other cases where the bulk records have been destroyed and there is in existence a summary of those records made, not for the purposes of the case, but in the ordinary course of business, and it is testified to by a credible witness, in such cases the production of the original records is out of the necessity of the case and to prevent a miscarriage of justice, waived.

The Court: The court will pass on any of those exceptions to the general rule when they arise. I do propose to take a common-sense view of this, I don't intend to make any rulings that would tend to smother justice in her own robes, as *Corpus Juris* says, but in the meantime I will require you to comply with this rule.

Mr. Strauss: Justice can be smothered in the other way by using summaries made by the other parties, stating their conclusions as to what the original records mean.

The Court: You may proceed.

Mr. Mason: I take it that the Court's ruling indicates that this witness at least is sufficiently qualified to express

his view from his experience as to what is a reasonably representative operation. It must be remembered that we do not offer Exhibit 43 as reproducing exactly one thirty [fol. 671] sixth of the traffic carried on this particular division over a 12-months period, but rather as representative of operations in what is neither the peak period nor a slack period.

The Court: That is what the Court understands.

Mr. Mason: I take it opposing counsel are not deceived as to the purpose.

Q. Now Mr. La Fountaine will you refer to exhibit No. 43 and I will ask you to refer to the trains shown in lines one to four inclusive. Are those through trains or local trains?

A. Those are local trains.

Q. Now referring to the trains in lines seven and eight, generally speaking, are those through or local trains?

A. Those are through trains.

Q. Is Havre one terminal and Blackfoot another terminal of an operating subdivision of the division?

A. Yes sir.

Q. Again in lines 19 and 16, the trains between Blackfoot and Whitefish, may also refer to lines 17 and 18; are those through or local trains?

A. Those are through trains.

Q. And are Blackfoot and Whitefish terminals of operating subdivisions?

A. Yes sir.

[fol. 672] Q. Then proceeding to lines 21 to 25 inclusive, the trains operating between Troy and Whitefish, are those two points terminals of operating subdivisions?

A. Yes, sir.

Q. And are those through trains or local trains?

A. Well there are local trains included. They are principally through trains; there is a tri-weekly local included.

Q. On lines 27—it should be 26 to 31 inclusive, trains between Troy and Hilliard, are those through or local trains?

A. The local trains are included, but the preponderance of those trains are through trains.

Q. Are Troy and Hilliard terminals of operating subdivisions?

A. Yes, sir.

Q. Between what points does the entire Kalispell division extend?

A. From Hilliard, Washington to Havre, Montana.

Q. And it is divided into four subdivisions at the points you have mentioned?

A. Yes, sir.

Q. Then you have included on this exhibit both local trains operating short distances and with a smaller number of cars, and the through trains operating over the entire [fol. 673] tire subdivision with the larger number of cars, have you?

A. Yes, sir.

[fol. 674] Q. Have you before you, Mr. LaFountaine, a statement in one sheet entitled, "Great Northern Railway Company, Ore Trains Operated on Mesabi Division, August 15-24 inclusive, 1939?"

A. Yes, sir.

Q. Was this prepared by you or under your supervision?

A. Yes, sir.

Mr. Mason: May we have the statement just identified by title marked No. 44?

The Clerk: Defendant's exhibit No. 44 for identification.

Mr. Mason:

Q. From what particular document or records was the information shown on this exhibit taken?

A. They were taken from the dispatchers' train sheets.

Q. Do you have in the courtroom with you the dispatchers' train sheets covering the districts referred to on the face of the exhibit?

A. Yes, sir.

Q. For the period August 15 to August 24, 1939, inclusive?

A. Yes, sir.

Q. Are they available for the examination and use of opposing counsel?

[fol. 675] A. Yes, sir.

Q. As to the ruling grade, are you familiar with the territory covered by this exhibit?

A. Yes, sir.

Q. You have traveled over it frequently, have you?

A. Yes, sir.

Q. Are these figures showing ruling grade in accordance with your own knowledge?

A. Yes, sir.

Q. Do you have a profile furnished you by the engineering department of your railroad which shows these ruling grades?

A. Yes, sir.

Q. Is that likewise here in the courtroom available for the use of opposing counsel?

A. Yes, sir.

Q. Have you compared the information shown on No. 44 with the dispatchers' train sheets to determine whether it is true and correct?

A. Yes, sir.

Q. As to the computations shown at the foot of the exhibit, did you check those?

A. Yes, sir.

Q. Will you state whether or not the exhibit truly and correctly reflects the underlying records from which it was [fol. 676] prepared?

A. To the best of my knowledge and belief it does.

Q. As to the ore operation, is the showing for the period August 15 to August 24 reasonably typical of the operation as it is carried on during the period when ore is moving?

A. Yes, sir.

Q. During what period of the year does the Great Northern handle ore on the Mesabi Division?

A. Starting about the first of May to the fifteenth of November.

Q. That is the extent of the season each year?

A. Yes, sir.

Q. What consideration determines when the operation shall start and how long it will continue?

A. It is our ability to get boats through the Great Lakes up to the docks.

Q. It is the condition of navigation on the Great Lakes?

A. Yes, sir.

Q. Is your operation the delivery of ore from the fields to the docks of the Great Lakes where it is shipped?

A. Yes, sir.

Q. Will you refer to your exhibit No. 42 which is a map [fol. 677] of the Great Northern lines?

A. Yes, sir.

Q. Will you point out on that map the district to which the showing on exhibit No. 44 for identification relates. Is it outlined on this map in any particular way?

A. Yes, sir, it is outlined here, the ore line with this dark heavy mark.

Q. Is that the line between Gunn, Minnesota, and Allouez, Wisconsin?

A. That is correct.

Q. And also extending from Virginia, Minnesota, down to the main line and thence to Allouez?

A. Yes, sir.

Q. Is the district referred to on your exhibit No. 43 shown in the black line on exhibit No. 42?

A. I don't understand that question.

Q. The preceding exhibit relating to the Kalispell Division?

A. Oh, yes, that is the heavy dark line from Pacific Junction—Havre to Hilliard, Washington.

The Court: If I understand you, referring to exhibit No. 42, the so-called "ore line," the lines over which your ore is hauled is shown on the heavy dark line on exhibit No. 42, the one area being over Idaho, Montana, and across [fol. 678] Washington and the other in Wisconsin and Minnesota?

Mr. Mason: I don't think that was the purport of the question. The district shown on exhibit No. 44 as representing the ore haul is entirely at the eastern end of the line, is it not?

A. Yes, sir.

Mr. Mason: Perhaps I confused the record a little bit by trying to tie exhibit No. 43 which is a typical main line operation to the Kalispell Division in Montana, Idaho, and Washington.

The Court: I see.

Mr. Mason:

Q. The mileage of the ore lines as shown on exhibit No. 44 is slightly in excess of 120 miles, is it not?

A. The distance from Allouez to Gunn is 100 miles.

Q. What is the total mileage covered by the black line on exhibit No. 43 at the east end of your railroad?

A. It is approximately 200 miles.

Q. Is the showing on exhibit No. 44 for identification typical as to the lengths of the trains in which the ore is handled as well as the volume of the operation?

A. Yes, sir.

Mr. Mason: We offer the statement in evidence as exhibit No. 44. Your Honor, I should say in explanation of the offer that the purpose of the exhibit is not necessarily to show that train operations of units of 180 cars are practical in the operation in Arizona or anything of the kind but this shows one of the typical long-train operations in the United States under a particular condition and we shall show when we come to the Southern Pacific branch of the case that there are places in Arizona where if traffic were offered it would be feasible to conduct a similar operation. The purpose of the exhibit, in other words, is to show along the lines of our general allegation that long-train operation under particular circumstances is regularly carried out as a standard practice in other parts of the United States and to continue the allegation there are no reasons from the standpoint of safety or otherwise why a similar operation might not be conducted in Arizona if it were not for the law.

Mr. Strauss:

Q. Did you prepare this exhibit, Mr. LaFontaine?

A. I aided in preparing it, I supervised it.

Q. Who did the actual work on it?

A. My office force and myself.

Q. Your method in selecting this period covered was [fol. 680] the same as with respect to Exhibit No. 43?

A. There was no particular reason for selecting any period for this operation because it is uniform from start to finish, it is a summer operation only. I took the same dates I had on the freight train exhibit.

Q. These ruling grades, I take it they are the ruling grades against traffic in the direction that it is moving as shown on the exhibit, is that correct?

A. No, the grade is shown there—which one do you have in mind, from Kelly Lake to Allouez?

Mr. Strouss: Yes.

A. No, that is the ruling grade, two-tenths of one per cent.

Q. It is in the direction that traffic is moving?

A. Yes, sir.

Q. And that is true of each one?

A. That is right.

Mr. Strouss: That was my question, I guess I didn't make it clear.

A. I didn't understand your question.

Mr. Mason:

Q. What you meant was, I think, Mr. Strouss, and I will ask the witness, that is to say, a train going from Kelly [fol. 681] Lake to Allouez by Casco must travel over a two-tenths grade?

A. That is correct.

Q. And a train going from Allouez to Kelly Lake by Casco must move against a six-tenths grade with the exception noted at the foot of the exhibit?

A. That is correct.

Mr. Strouss: This is practically all a double track operation, isn't it?

A. It is double track from Allouez to Swan River, 84 miles.

Q. It is only approximately 16 miles from there into Gunn that is not double track in that direction?

A. In that direction, yes.

Q. How far is it up to Kelly Lake?

A. Twenty-five miles from Swan River.

Q. This map is not drawn to scale, is it?

A. No; it operates there similar to a double track because the empties go from Swan River to Kelly Lake and the loads come from Kelly Lake via the Casco line to Brookston, there again entering double track.

Mr. Strouss: I make the same objection as was made to exhibit No. 43.

The Court: The objections are overruled and the exhibit may be admitted in evidence.

[fol. 682] The document referred to was received in evidence and marked defendant's exhibit No. 44.

The Court: We will take a brief recess at this time.

Thereupon a short recess was taken after which proceedings were resumed as follows:

The Court: You may proceed.

Mr. Mason:

Q. Mr. LaFontaine, you show all of these trains as having been handled with Mallet locomotives. What is the wheel arrangement of those Mallets?

A. 2-8-8-2.

Q. Are those the large R type that you referred to in your previous testimony?

A. No, those are the N2 type engines.

Q. The exhibit indicates that you handle 182 loaded cars on the average in 32 trains from Kelly Lake, line 1. Are those handled with one locomotive?

A. Yes, sir.

Q. Is that Mallet type locomotive shown on this exhibit, is that the locomotive that corresponds to the coal burner?

A. AC-9 type.

Q. On exhibit No. 5?

A. Yes, it corresponds in general design with the AC-9 [fol. 683] locomotive shown on No. 5 with the exception that our engine is a 2-8-8-2 and yours is a 2-8-8-4.

Q. I think in answer to questions of counsel you said that the trains loaded with ore come from the points of origin down one line to where the double track commences and thence down the double track to the head of the Lakes, isn't that correct?

A. The preponderance of the tonnage moves in that manner.

Q. In returning what is the operation?

A. The empties move by the double track to Swan River, then go from Swan River to Kelly Lake.

Q. Are they then distributed from Kelly Lake to the actual points of the mining operation and loaded?

A. Yes, sir, Kelly Lake is the assembling yard where the transfers bring the ore from the mines into the yard and make up the trains.

Q. Do I understand that this is a regular back and forth operation of loads from the assembly points down to the head of the Lakes and empties back to the assembly points for distribution?

A. Yes, sir, that is correct.

Q. This shows an average of 182 cars and a maximum of 185 cars per train. I would infer from that that the [fol. 684] minimum is around 180 cars or 178 cars, is that correct?

A. There is seldom a train that doesn't have 180 cars.

Q. Of loads?

A. Of loads or empties, either one. We aim to have 180 or more.

Q. Have you ever seen any of these Mallet locomotives in the shops undergoing repair or refitting?

A. Yes, sir.

Q. Are you familiar with the type from that standpoint?

A. Yes, sir.

Q. Have you seen these ore trains in operation personally?

A. Yes, sir.

Q. Ridden on them?

A. Yes, sir.

Q. When you rode on them, what point on the train did you ride?

A. I rode the caboose.

Q. Have you ridden trains of empties as well as trains of loads?

A. Yes, sir.

Q. Have you seen these ore cars that are used in these operations in the shops?

[fol. 685] A. Yes, sir.

Q. Are you familiar with their construction?

A. Yes, sir.

Q. Approximately what is the capacity of these ore cars in pounds or tons?

A. Seventy-five ton cars.

Q. That means they will hold 75 tons of ore?

A. Yes, the large cars. We still have a few 50 ton cars but they are not in use this year. They were at the time this report was made.

Q. Are you familiar with the loading of these cars? Are they loaded to full capacity at all times?

A. They will average about 92 tons per car gross, about 71½ tons of ore per car on an average throughout a given period.

Q. I take it your familiarity with the cars and having seen them in the shops extends to other types of cars that your company operates?

A. Yes, sir.

Q. Is that a part of your duty as general supervisor of safety to visit the shops and inspect the operations there?

A. Yes, sir.

Q. Mr. LaFontaine, will you refer please to a statement in one sheet entitled "Great Northern Railway Company, [fol. 686] Maximum Number of Cars Handled in Main Line Passenger Trains Nos. 1 & 2, Total for the 10-Day Period, June 1-10, Inclusive, 1939." Have you that exhibit before you?

A. Yes, sir.

Mr. Mason: May we have that marked No. 45, if Your Honor please.

The Court: It may be marked:

The Clerk: Defendant's exhibit No. 45 for identification.

Mr. Mason:

Q. Did you prepare the statement identified as No. 45?

A. I assisted in doing so.

Q. It was prepared in your office?

A. Yes, sir.

Q. From what sources was the information shown thereon taken?

A. From the dispatchers' train sheets.

Q. Are the dispatchers' train sheets for the ten-day period indicated by the exhibit?

A. Yes, sir.

Q. Are those dispatchers' train sheets which form the source of this exhibit available in the courtroom?

A. Yes, sir.

Q. Available for the examination and use of counsel [fol. 687] - sel?

A. Yes, sir.

Mr. Mason: Your Honor, those are likewise tendered for counsel's use for the purposes of this exhibit.

Q. There are certain computations which appear between the blocks on the exhibit. Did you make those computations?

A. Yes, sir.

Q. Did you yourself make the recapitulations?

A. Yes, sir.

Q. Are those made from the information shown on the face of the exhibit itself?

A. Yes, sir.

Q. And capable of check on the exhibits, are they?

A. Yes, sir.

Q. Has the exhibit been checked against the dispatchers' train sheets?

A. Yes, sir.

Q. Will you say whether or not it is true and correct?

A. To the best of my knowledge and belief it is correct?

Q. Did you select the period shown on the exhibit?

[fol. 688] A. Yes, sir.

Q. What governed that selection?

A. Well, our two heaviest passenger traffic seasons are during the Glacier Park season which opens on June 15 and closes on September 15 and during our holiday periods, so in going over the matter of preparing this exhibit I figured that my judgment indicated to me to select this period in June previous to the movement of the park season would be a very typical period of normal performance of this train.

Q. Would the traffic be heavier during the park's season?

A. Yes, sir.

Q. Would that result in longer or shorter trains in the territory covered by this exhibit?

A. Both. In some cases we would be able to handle the business in one long train and in other cases we would be required to run two sections of the same train.

Q. What is about the maximum length of the passenger train that you operate in regular service?

A. Twenty cars.

Q. What determines the length of the passenger train?

[fol. 689] A. Ability to maintain our schedule.

Q. Do you operate trains of that length during the holiday season?

A. Yes, we do.

Q. Is that a period of possibly cold weather in the territory through which the Great Northern runs?

A. It gets pretty cold up there in the winter months. During the holiday season we might have a warm period.

Q. Do you have any difficulty in heating the rear cars of your trains during the period of heavy traffic in the holiday season?

A. No, sir.

Q. Will you say whether or not the ten-day period shown on exhibit No. 45 for identification is reasonably representative according to your best information and judgment of passenger traffic of your trains Nos. 1 and 2 over the twelve months?

A. It is, in my judgment.

Mr. Mason: Have you any questions, Mr. Strouss, before we offer the exhibit.

Mr. Strouss: No, I think not.

Mr. Mason: Accompanying the offer with the tender of the train sheets we now offer the exhibit as exhibit No. 45 in evidence.

[fol. 690] Mr. Strouss: The same objection.

The Court: Same ruling, the exhibit may be admitted in evidence.

The document referred to was received in evidence and marked defendant's exhibit No. 45.

Mr. Mason:

Q. Referring to exhibit No. 45, Mr. LaFontaine, you have shown the trains east and westbound under the same name and number but for four separate districts. Will you explain briefly why you have done that?

A. I blocked them out in this manner because we do on certain occasions set out and pick up cars at Fargo, North Dakota; then from Fargo to Havre I made this block because we always have a set-out sleeper for Great Falls and Helena, train No. 1, and have a sleeper to pick up going east on No. 2 coming from Helena and Great Falls.

Q. That is set out or picked up at Havre, is it?

A. Correct. Then I block out the Havre to Spokane because there again we set out cars for Portland, Oregon, and pick up sleepers for Seattle and coming out of Seattle on No. 2 we have a regular Spokane set-out sleeper and we also pick up sleepers from Portland.

Q. So that these are the points where the normal operation or consist changes or may change?

[fol. 691] A. Yes, sir, that is correct.

Q. Is the Empire Builder No. 1 and 2 your principal main line passenger train between the Twin Cities and the Pacific Coast.

A. It is the only train we have between the Twin Cities and Seattle, through passenger train.

Q. You have of course other local trains operating in various parts of the territory, both main and branch lines?

A. Oh, yes.

Mr. Mason: I think that is all. You may cross-examine if you wish at this time, Mr. Strouss.

Mr. Booth: As to the train sheets, counsel stated during the recess he wanted to make some examination of them and I will state in regard to them they are the records of the company which are required by the order of the Interstate Commerce Commission relating to destruction of records, a certified copy of which is on file as the last exhibit in exhibit No. 8, and this regulation of the Interstate Commerce Commission requires the dispatchers' train sheets to be preserved permanently, so I may say with some considerable reluctance I asked the operating managements to send these train sheets and if for counsel's convenience [fol. 692] he wants to take them to his hotel or office to examine them he has that right but I implore counsel to be very careful that none of them are lost.

Mr. Strouss: I appreciate that those are records which are required to be kept as a permanent record by the Interstate Commerce Commission.

Mr. Booth: I have the utmost confidence that none of the railroad men who examine them will make any alterations on them because they are as careful about them as a bank cashier is about his records.

The Court: If you require time in which to examine them before examining this witness the court will give you whatever reasonable time is necessary.

Mr. Mason: We are wholly agreeable to any time that Mr. Strouss may ask for.

Mr. Strouss: I have some questions which I can ask this witness without first examining the exhibit.

The Court: Well, go ahead with that line of cross-examination.

Cross-examination.

By Mr. Strauss:

Q. Mr. LaFontaine, I think you testified that about 318 miles of your railroad are double tracked, is that right?

[fol. 693] A. That is correct.

Q. Where is that double tracking located?

A. Starting out of St. Paul going westward we have double tracks from St. Paul to Delano, 38 miles; Atwater to Willmar, 14 miles; Willmar to Pennoek, 7 miles; Campbell to Breckenridge, 15 miles; Surrey to Minot, 7 miles; Wheelock to Williston, 23 miles; Williston to Snowden, 25 miles. We have 14 miles starting at Havre going east.

Q. Fourteen miles east of Havre into Havre?

A. That is right. From Shelby to Blackfoot, 50 miles; from Summit down to Red Eagle, 34 miles; Columbia Falls to Whitefish, 9 miles; Kootenai Falls to Troy, 7 miles; Dean, Washington, to Hillyard, 13 miles; from Hillyard to Fort Wright, 7 miles; Bluestem to Lamona, Washington, 18 miles; Everett to Seattle, 32 miles.

Q. This double tracking, how is it operated?

A. As double track under standard rules.

Q. In conjunction with your single tracking do you operate so as to have as many passes as possible where you have double tracks?

A. Oh, yes, we build those out of terminals so as to get your trains started out of terminals, get them moving and at locations where it would be to our best advantage.

[fol. 694] Q. Those are located where traffic is apt to bunch so as to move the traffic along on the double tracking and avoid the bunching?

A. We would like to make use of it for that purpose, yes.

Q. That has been your effort in locating that double tracking, hasn't it?

A. That is one reason, yes, to keep the traffic moving.

Q. Some of it is operated by electric buttons, that is, the switches are opened automatically?

A. Some of them are, yes.

Q. So that the traffic can continue moving without stopping to open the switch?

A. Yes, sir.

Q. What is the average speed of your freight trains?

A. On the Kalispell Division we have a maximum speed of 50 miles an hour; between Havre and Blackfoot up the east slope of the mountains from Blackfoot to Summit, it is 35 miles an hour; from Summit to Walton, 25 miles an hour, on the west slope of the Rocky Mountains from Walton to Whitefish it is 30 miles an hour.

Q. I was asking if you know what is the average speed [fol. 695] which your freight trains make?

Mr. Mason: Your Honor, we will have an exhibit which will show that figure exactly as taken from the records of the company.

Mr. Strouss: Very well.

Mr. Mason: Of course that will not be restricted to main line trains, it will be the figures shown on the O. S. A. Reports.

Mr. Strouss: Will that also show your average train lengths?

Mr. Booth: Yes, the whole system, main and branch lines.

Mr. Strouss:

Q. You don't have it for the main line only, that is, from St. Paul to Seattle?

A. The schedule running time of 401 is 90 hours. I can have that information available if you want it.

Q. These locomotives that you testified to as being similar to those shown on the exhibit, the Southern Pacific locomotives shown on the exhibit correspond to as similar. Do you mean under the Whyte classification?

A. I don't know what classification you refer to. I had in mind the design, the wheel base construction, and the tractive effort of the locomotive.

Q. As tractive effort increases, there is an increase in [fol. 696] weight on drivers, isn't there?

A. I wouldn't say.

Q. I notice there was no reference made to weight on drivers or boiler capacity.

A. May I hear your question again? I thought you said "speed." Will you ask me that question over again?

Q. Where there is an increase in tractive effort, there is usually a corresponding increase in weight on drivers?

A. I would say "yes." That is not one-hundred per cent true, the engine may be made more powerful through other

methods, but the weight on drivers is a big factor.

Q. Did you intend by your testimony to say that the locomotives which you referred to as owned by the Great Northern corresponding to those of the Southern Pacific were the only locomotives that the Great Northern owns?

A. No, I didn't mean to infer that.

Q. Are there other types of locomotives which the Great Northern owns which are not similar to those of the Southern Pacific Company?

A. Yes, sir.

Q. What are those?

A. We have the N-2 engines, which are 2-6-8-0.

[fol. 697] Q. You have electric locomotives too, don't you?

A. Yes, sir.

Q. Traffic does not take the same tariff, does it, all freight traffic?

A. I believe not.

Q. There would — some difference in tariff according to whether it was expedited movement or moved with so-called "drag" freight?

A. Did you ask the difference in the tariff?

Q. I say there would be a difference in tariff based upon the difference in type of movement.

A. I don't understand that the speed with which you move the commodity would have any bearing on the tariff.

Q. There is as to the type of traffic?

A. That is correct.

Q. One would take a different tariff than apples, for example?

A. Yes, sir.

Q. That might have some bearing upon the tonnage that was placed into a train?

A. Because of the schedule that we wanted to maintain?

Q. The schedule along with the rate or tariff that the traffic pays for the movement.

[fol. 698] A. I am sorry but I don't have your question clear. We maintain a different schedule certainly with perishable food, apples, than we do with ore but there is a stipulated tariff for moving this commodity in either case.

Q. I mean if the tariff were lower you might attempt to get a greater tonnage into a train?

A. As an operating man I don't know that we know much about the tariff governing the commodity in the cars.

Q. Of course volume of traffic available has considerable to do with the movement of trains both as to tonnage and train length?

A. Yes, that is the first factor, you have to have the tonnage first.

Q. And your schedule?

A. Yes, that would be second, I would say.

Q. Time would be an element of course.

A. Which is the schedule, yes.

Q. It might be that in instances at least it would be the better policy to move faster than with a slower and longer train, isn't that true?

A. We do that.

Q. That would depend somewhat on the type of traffic you are moving?

A. Yes, sir.

[fol. 699] Q. Do you have any "hot shots" on your system?

A. This 401 and 402 are the hottest we have.

Q. They correspond with the so-called "over-night" movement?

A. I don't know what you mean.

Q. Are you acquainted with the overnight trains which are operated on the Southern Pacific, the so-called "hot shots"?

A. No, I am not.

Q. If traffic were being lost by reason of a faster movement by competitors of course that would have some effect upon the policy of a railroad company in meeting that competition by determining—by shorter and faster trains than longer and slower trains?

A. I would say that would have a direct bearing on the schedules or when they are preparing them.

Q. Of course other things being equal it would be possible to move the shorter train faster than a longer train?

A. There is a certain length train when you take into consideration the power you got that you can move perhaps as fast as you could move the engine light. We have a safety restriction of 50 miles an hour for freight trains and we haul a pretty lengthy freight train at that speed [fol. 700] over our railroad.

Q. You have quite a few branch lines?

A. Yes, nearly 50 per cent of our railroad is branch lines.

Q. A good part of them are located in the so-called "wheat belt"?

A. Yes, quite a few of them throughout North Dakota and Montana.

Q. They feed considerable traffic to your main line movement?

A. Yes, sir.

Q. You testified as to similarity of freight cars on the Great Northern with those on the Southern Pacific and mentioned particularly that 95 per cent of the Great Northern freight cars were steel or steel underframe cars. You don't mean 95 per cent are all steel and steel underframe. They are either steel or steel underframe?

A. That is correct.

Q. In what other respects are they similar to the Southern Pacific's?

A. In addition to the steel underframe they have steel posts, steel roof, steel ends.

Q. That is covered by the description "steel" isn't it?

A. We use the same kind of couplers, Type D and E [fol. 701] Couplers. A. A. R. standard couplers. Their cars are all pretty generally designed in standard with recommendation practices with the mechanical section of the American Association of Railroads.

Q. That is the Great Northern?

A. The Great Northern and other roads.

Q. Where you say the improvements have developed the same as on the Southern Pacific, except as to the percentage of steel and steel underframe cars, you wouldn't mean to give in percentage all cars they have that have added the different improvements as shown on that exhibit?

A. I made a general statement that in my opinion better than 95 per cent of our cars were of that construction.

Q. Steel and steel underframe?

A. Yes.

Q. On the exhibit are shown a lot of other improvements in freight cars over that period. You don't mean to say that your cars have, 95 per cent of them have all these other improvements?

A. I will make that statement because I have checked them over.

Q. Take for example the air brakes. Had you 95 per cent A. B. brakes on the cars owned by the Great Northern at the present time?

[fol. 702]. A. No, sir.

Q. Then you don't mean to say that each of these different improvements that you have, 95 per cent of your cars have all these different improvements?

A. No, 95 per cent of them are either steel or steel under-frame construction.

Q. Probably the bigger percentage of your cars still have the K triple valve?

A. No, the first of July we had 20 per cent A. B. brakes and I am confident now that by the end of the year we will have 29 per cent A. B. brakes on our freight equipment.

The Court: What does that expression mean?

A. That is a type of brake.

Mr. Mason: It is a brake valve properly speaking, isn't it?

A. Triple valve, brake valve. It is a newer or more modern triple valve.

Mr. Strauss: This territory around Mesabi, on the Mesabi Division, that is not undulating territory in there, I mean with dips and hog-backs?

A. No, not generally speaking, it is not. We have some that is rolling from Swan River to Kelly Lake and some little roll to the grade from Kelly Lake down to Brookston.

[fol. 703] Mr. Strauss: Are you going to have, with the witness, that is coming later, also the passenger train, average passenger train car lengths, and that information, or is it limited to just freight?

Mr. Mason: I think it is limited to freight trains entirely. I don't think there is contemplated any showing as to average passenger train lengths.

Mr. Strauss:

Q. Do you know what the average passenger train length is on the Great Northern operating between Seattle and Minneapolis or St. Paul?

A. The average passenger train?

Q. Yes.

A. That is trains number 1 and 2; those are the only ones we have.

Q. What is the average length of those trains over the year?

A. In cars?

Q. In cars.

A. Well, I believe that around 40 per cent or a little better exceed 14 cars, and they vary from there, from 15, 16, 17, 18 cars.

Q. You mean operating the complete distance between Seattle and Minneapolis?

A. No, I don't. That is the reason I broke this down, to make a fair statement, but some place enroute between [fol. 704] Seattle and St. Paul either train 1 or 2 will have that number of cars in the train over a given territory.

Q. That doesn't necessarily mean then it operates the full distance between Seattle and Minneapolis with that consist.

A. No.

Q. And these trains that are shown on Exhibit 45, that exhibit does not mean that those particular trains operated the full distance between Minneapolis and Seattle with that consist?

A. No, sir, that is not on the exhibit in that manner.

The Court: Do I understand, Mr. La Fountaine, that the Great Northern only operates the one train each way, the two passenger trains, on your line there?

A. That is the only through passenger train that carries passengers from St. Paul to Seattle.

Q. Number 1 going one way and Number 2 going the other?

A. Going eastward, yes, sir.

Mr. Strauss: You say the Glacier Park period begins about the 15th of June?

A. June 15th.

Q. That is when the park opens?

[fol. 705] A. Yes, sir.

Q. You don't think that traffic shown June 1st to 10th would in any way reflect the tourists moving west in anticipation of that opening?

A. No, I am sure it wouldn't, because the roads are not opened into the park usually until the 30th of June. We don't get our park travel that early.

Q. There is some tourist movement that early in the year, isn't there?

A. Tourist movement?

Q. June 1st to 10th?

A. No, we don't enjoy it.

Mr. Strouss: I think that is all I have to ask.

Redirect examination.

By Mr. Mason:

Q. Now, Mr. La Fountaine, referring to trains number 1 and 2, do these trains operate with a substantial portion of the consist consisting of Pullman cars?

A. About fifty per cent Pullman cars.

Q. You are familiar with the types of Pullman cars operated on other railroads in the United States, including the Southern Pacific?

A. Yes, sir.

[fol. 706] Q. Are the Pullman cars operated in the Empire Builder much the same as on those other railroads?

A. Yes, sir.

Q. They are so-called Standard Pullmans, not designed for the Empire Builder, are they?

A. No, Standard Pullman sleepers.

Q. As I look at Exhibit 45, does that mean you were able to operate or did operate the eastbound train Number 2 on ten different days, June 1st to 10th, 1939, with fifteen cars or more for 262 miles from Fargo to St. Paul?

A. Number 2? They have fifteen cars or more through the ten days period on each one of the trains from Fargo to St. Paul.

Q. For the entire distance, 262 miles?

A. Yes, sir.

Q. And similarly showing that Number 2 during that ten day period had 15 cars or more the entire distance from Havre to Fargo for seven of the ten days.

A. Yes, sir.

Q. That is a distance of 663 miles eastward, is it?

A. Yes, sir.

Q. Now, looking at your Exhibit No. 43, operations on the Kalispel Division, I think you identified some of these [fol. 707] trains on the particular lines as being through trains.

A. Yes.

Q. Are those through trains the ones including Numbers 401 and 402?

A. Yes, sir.

Q. Then you have on this exhibit symbols of your other scheduled symbolized trains.

A. Yes, sir.

Q. Are those the trains that contained on the occasions indicated seventy-one or more cars?

A. Yes, sir.

Q. Will you say whether in your experience trains 401 and 402 operate with seventy-one or more cars and maintain their schedules?

A. Yes, sir; the normal train for 401 over this territory is 75 cars on account of the schedule.

Q. Westward that is 401?

A. Yes, sir.

Q. Eastward, what is the normal on 402?

A. 5,000 tons on 402; that will run about 95 cars if all are loads; if there are a few empties mixed in, you might have 90 loads and 10 empties.

Q. Do you make that 90 hour and 111 hour time on that schedule?

A. We have a very good on-time record; I couldn't give [fol. 708] you the percentages.

Q. This is typical of the operations on the Kalispel Division. Would you say whether or not on the balance of your main line, train lengths correspond with those depicted on the Kalispell Division?

A. Yes, sir. 402 starts out of Inter-bay, Seattle, with a 5,000 ton unit and goes right through to Minneapolis with that tonnage, and 401, because of their scheduled time, operates with approximately a 75 car train.

Q. Does it ever carry more than 75 cars?

A. Yes, it has carried more than seventy-five. It has at certain locations and times, but they try to maintain a 75 car, 5,000 ton train.

Q. I think you were asked about the effect of cutting down tonnage in order to attain train speed. In your ex-

perience and with your type of locomotives that you operate on your main line, is it necessary as a general rule to cut train length below 70 cars in order to enable schedules to be maintained?

A. No, it is not.

Q. Will you say whether or not it is possible with the types of equipment that you use on your through trains to operate up to maximum speeds, loaded, as readily with [fol. 709] more than 70 loads as with less than 70 loads?

A. Yes, sir, it is.

Q. You were cross-examined as to the locations and extent of your double track. Do I understand your double track is largely in the neighborhood of the principal division terminals and freight terminals?

A. With the exception of from Shelby to Blackfoot, which is a subdivision terminal, that is a 50 mile stretch of double track from Summit to Red Eagle, the Western slope of the Rocky Mountains, that is apart and away from any terminal, that is 34 miles of double track, from Lamon, Washington, to Blue Stem, are the only three pieces of track that are not built right out of a division point for the use of getting trains out of the terminal.

Q. That is to avoid congestion due to meets in the immediate neighborhood of terminals?

A. Yes, sir.

Q. Mention was made of electric locomotives. Are those confined to a particular district of the railroad?

A. Yes, sir, between Wenatchee, Washington, and Skikamish, Washington.

Q. Is that over the Cascade Mountains?

A. Yes, sir.

[fol. 710] Q. And what particular feature of your operation across the Cascade Range makes the use of electric locomotives advisable or necessary?

A. Well, the grade and their tunnel, they have a long tunnel there, longest on the Western Hemisphere.

Q. What is the length of the tunnel?

A. 7.79 miles I believe.

Q. That is the Cascade tunnel?

A. Yes, sir.

Q. You use electric locomotives instead of coal or oil burning locomotives because of the smoke nuisance?

A. Yes, sir, and gas.

Q. What is the grade in there?

A. The grade up to the tunnel, from Skikomish to the west portal of the tunnel, is 2.2, and through the tunnel is 1.56 per cent.

Q. Now, you were speaking of the grade within the tunnel.

A. The grade within the tunnel is 1.56 percent.

Q. Against the eastward traffic?

A. Yes, sir.

Mr. Strouss: This is hardly proper redirect examination. I didn't go into this.

Mr. Booth: You went into electric locomotives.

[fol. 711] Mr. Strouss: I asked him if he testified to all the different types that he had.

The Court: Well, it is true that some of this may go beyond the scope of redirect. I will overrule the objection.

Mr. Mason: Some reference was made, I think, to the use of remote control switches in some of the double tracked territory. Do you have so-called centralized traffic control in any of your double tracked territory?

A. Nowhere on the railroad.

Q. Do you have spring switches which will go back into place upon leaving a siding or leaving double track for single track?

A. Yes, sir.

Q. Is that the type of switch you had in mind in answering the question of opposing counsel.

A. Not exactly; we have remote control switch operation, too.

Q. Tower operation?

A. Tower operation, operator in a tower, train dispatcher in some cases.

Q. Are those primarily in the neighborhood of large terminals such as St. Paul or Seattle?

A. No, they are more generally located along the railroad.

[fol. 712] Q. You have tower operated switches elsewhere?

A. Yes, sir.

Q. You were questioned also as to the locomotive, or mentioned the locomotive of the 2-6-8-0 type.

A. Yes, sir.

Q. What is the tractive effort?

A. 95,000 pounds.

Q. Is that an articulated locomotive?

A. Yes, sir.

Q. Used in freight service?

A. Yes, sir.

Q. Then I take it a little smaller than the AC-4 type shown on Exhibit No. 5, which has a tractive effort of 117,000, approximately.

A. Yes, sir.

Mr. Mason: I suppose we had better suspend for the lunch hour.

The Court: The court will be at recess until two o'clock.

[fol. 713]

December 3, 1940, 2:00 P. M.

All parties being represented as heretofore noted, the following proceedings were had:

The Witness, C. E. LA FOUNTAINE was recalled to the stand.

Mr. Mason: I have no further questions of the witness on redirect examination, Mr. Strouss.

Recross-examination.

By Mr. Strouss:

Q. How many head-end cars are there on the Empire Builder?

A. There is one head-end car on the no. 1 westward and two head-end cars on no. 2 eastward.

The Court: What is the meaning of that term?

A. Combination of baggage and mail, we have a full mail car and a baggage car.

Mr. Strouss: I notice the distances shown on exhibit 45 between Fargo and Havre going west is 715 miles and east 663 miles. That is because they use different tracks?

A. Yes, two different routes. No. 1 going westward goes from Fargo to Grand Forks and thence to Minot, and goes from Minot west. No. 2 leaves Minot going eastward over what is known as the Fargo-Surrey a more direct [fol. 714] route to Fargo.

Q. Now, the statistics of railways of the United States issued by the Interstate Commerce Commission for the year

1938 gives the revenue freight originated by the Great Northern, products of agriculture \$4,944,077; animals and products, \$325,598; products of mines, \$8,825,245; products of forests, 1,939,900; manufactures and miscellaneous, 1,794,988. Would you say that represents accurately the tonnage of the Great Northern as to types?

A. Well I couldn't say of my own knowledge.

Mr. Strouss: You don't know.

Mr. Mason: May I understand, Mr. Strouss, the figures you read were the figures of revenue in dollars?

Mr. Strouss: Yes, in dollars.

Mr. Mason: They weren't tonnage figures at all then?

Mr. Strouss: No, this is revenue freight tonnage—tons of 2000 pounds, it is tonnage.

Mr. Mason: And not dollars.

Mr. Strouss: That is right.

Q. You wouldn't know as to that?

A. No, I wouldn't know.

Mr. Strouss: That is all.

The Court: Any further examination of this witness?

[fol. 715] Mr. Mason: No I have no further questions?

Mr. Strouss: I may have some further examination after I have examined these train sheets.

Mr. Mason: When will that be Mr. Strouss?

Mr. Strouss: I am having an examination made of them at the present time, and I want to check them tonight.

The Court: It is understood that this witness will not be permanently excused until after Mr. Strouss has had an opportunity to examine the sheets.

Mr. Mason: We will ask Mr. Young to resume the stand. Your Honor will recall Mr. Young having testified previously, the manager of personnel, Illinois Central.

Mr. Strouss: Does Mr. La Fontaine have any schedules, any of the train schedules of the Great Northern?

Mr. La Fontaine: What do you mean by that?

Mr. Strouss: Well, the train time-tables.

Mr. Mason: Do you wish those as well?

Mr. Strouss: Yes, if I may have them.

Mr. Mason: Are these current operating tables, current operating time-tables Mr. La Fontaine?

A. Yes sir.

Q. Will you identify them by divisions and States and [fol. 716] then hand them to Mr. Strouss?

A. Between city terminals, time-table No. 216, effective September 29, 1940; Willmar division timetable No. 49, effective 12:01 A. M., June 25, 1939; Minot division time-table No. 48, effective 12:01 A. M., Sunday, April 1, 1939; Butte division time-table No. 48, effective 12:01 A. M., Sunday, May 12, 1940; Kalispell division time-table No. 45, effective 12:01 A. M., Sunday, May 12, 1940; Spokane division time-table No. 92, effective 12:01 A. M., Sunday, September 24, 1939. Now, that is the main line. Do you want these side-issues?

Mr. Strouss: No.

Mr. Mason: I think it might be well to supply the one for the Mesabi division.

A. Mesabi division time-table No. 46, effective 12:01 A. M., Sunday, June 25, 1939.

Mr. Mason: I think we should also understand that the operating time-tables which you have handed to Mr. Strouss do not show the schedules or times of extra trains, but only goes to the regular schedules.

A. That is right. Dakota division time-table No. 61, effective 12:01 A. M., Sunday, June 25, 1939.

Mr. Strouss: Thank you.

[fol. 717] C. R. Young was recalled to the stand and testified further as follows:

Direct examination (continued).

By Mr. Mason:

Q. Mr. Young I will ask you to refer to exhibits Nos. 30 and 31, concerning which you testified in your other appearance on the stand.

A. Yes, I have them here.

Q. I will ask you if you have the dispatcher's train sheets now present in the courtroom which were testified to as furnishing the foundation for the information shown on exhibit 30?

A. Yes I have.

Q. Do you also have engineering profiles showing the ruling grades indicated on that exhibit?

A. Yes.

Q. Are they available for examination of opposing counsel?

A. They are.

Q. Do you also have the underlying documents which were used in compiling information shown on exhibit 31, the passenger train exhibit?

A. That exhibit was prepared from the train sheets also.

[fol. 718]: Q. The same train sheets?

A. The same train sheets, which were used in compiling exhibit No. 30.

Mr. Mason: Now Your Honor when the exhibits were previously tendered they were received subject to objection, including the objection as to competency because of the absence of original documents from which they were prepared. In order to obviate any possible errors in the record, we tender the exhibits and tender to opposing counsel the underlying documents which have been testified to by the witness.

The Court: You are referring to exhibits 30 and 31?

Mr. Mason: Yes, 30 and 31.

Mr. Strouss: And we make the same objection that we did to exhibits 43, 44, 45.

The Court: The Court will over-rule the objections to the new offer of these exhibits in evidence for the reason that the original data from which these exhibits were compiled now appear in court. However, the Court will require, in fairness to counsel that this witness be cross-examined at some time when counsel has had an opportunity to investigate this data.

Mr. Mason: We agree that that is fair and should be understood.

[fol. 719] (The documents referred to were received in evidence and marked "Defendant's Exhibit No. 30" and "Defendant's Exhibit No. 31", respectively.)

Mr. Mason: That is all.

Cross-examination (continued).

By Mr. Strouss:

Q. Do you have the time-tables for this same operation?

A. I think I have, Mr. Strouss. I have, yes, sir.

Mr. Strauss: May I have those also to work with?

Mr. Mason: No, objection.

Mr. Strauss: Do you want to identify them in the record?

Mr. Mason: Will you identify them Mr. Young?

A. Chicago terminal division through train time-table No. 45, taking effect 12:01 A. M. September 29, 1940; Chicago-Champagne districts, Illinois division, time-table No. 23, taking effect 12:01 A. M. September 29, 1940; Eldorado, Zeigler, Carbondale, Golconda, Bluford district, Brookport, branch, St. Louis division, time-table No. 16, taking effect 12:01 A. M., September 29, 1940; Fulton, Hickman districts of Kentucky division time-table No. 7, taking effect 12:01 A. M. September 29, 1940; Birmingham district, Mississippi division, time-table No. 20 taking effect 12:01 [fol. 720] A. M. April 21, 1940; Memphis division time-table, except Memphis terminal district No. 12, taking effect 12:01 A. M., Sunday, August 11, 1940; Yazoo, Canton and McComb districts of the Louisiana division, time-table No. 9, taking effect 12:01 A. M. Sunday, November 24, 1940; Freeport, Dubuque, Waterloo, Madison, Dodgeville, Cedar Rapids, Albert Lea districts, Iowa division, time-table No. 3, taking effect 12:01 A. M., September 29, 1940. These tables have been re-issued since the exhibit was prepared, but there has been very little change in the basic schedules shown in the time-tables, and these time-tables do not show the schedules of those trains which are operated as extra or symbol trains.

Mr. Strauss: Are extra trains symbol trains?

A. Some of the symbol trains are also operated as extras.

The Court: So that I may keep my part of the record straight here, as I have it there was introduced in evidence, or I should say was offered and marked for identification five exhibits during the testimony of Mr. Young, 27 to 31 inclusive. You have re-offered exhibits 30 and 31. No. 27 of course is the map, and No. 28 and 29, as I recall it, were only marked for identification; is that true?

[fol. 721] Mr. Booth: There will be an accounting witness here Your Honor who is due on Wednesday of next week, in order to testify—

The Court: I say they are only marked for identification?

Mr. Mason: I believe that is correct, they were only marked for identification.

Mr. Strouss: That is all.

[fol. 722] W. M. Burn was called as a witness in behalf of the defendant and being first duly sworn testified as follows:

Direct examination.

By Mr. Booth:

Q. Will you state your name and residence to the reporter?

A. My name is W. M. Burn. I reside at St. Paul, Minnesota where I am employed as statistician in the general office of the Great Northern Railway Company.

Q. How long have you been employed by the Great Northern Railway Company?

A. Since April 1, 1920.

Q. All of the time in statistical work?

A. Yes.

Q. Prior to April 1, 1920, were you in the railroad's employ?

A. Prior to April 1, 1920, for about two years I was with the operating statistics section of the United States Railroad Administration at Washington, D. C. I was employed as a statistician in that body.

Q. And prior to that time?

[fol. 723] A. Prior to that time I was employed by the Pennsylvania Railroad for about ten years at Harrisburg, Pennsylvania, as clerk and accountant in the division engineer's office.

Q. The Great Northern is a Class I railroad, is it not?

A. Yes, sir.

Q. Have you prepared an exhibit entitled "Great Northern Railway Company, Freight Operating and Freight Transportation Expenses Related to Traffic, Calendar Years 1922 to 1939, Inclusive"?

A. I have.

Mr. Booth: We offer this for identification as the next exhibit.

The Clerk: Defendant's exhibit No. 46 for identification.

Mr. Booth:

Q. The footnote to the exhibit states "Source: Annual Reports to Interstate Commerce Commission." To what annual reports do you refer?

A. I refer to the form "A" filed by Class I railway companies annually with the Interstate Commerce Commission.

Q. Is that the same form A which is attached to the certificate of the secretary of the Interstate Commerce Commission filed as an exhibit in this case and is the bottom document in defendant's exhibit No. 9?

A. Yes, sir.

Q. Those reports are printed and furnished to the carriers, are they not, in triplicate?

A. Yes, the forms are furnished to the carriers.

Q. The carrier fills them out, verifies two duplicate originals, and files them with the Interstate Commerce Commission, retaining one copy for its files?

A. That is correct.

Q. Take the 1939 report, I will ask you to read paragraphs 1 and 6 of the first column of the notice printed on the inside cover page of the exhibit.

A. Paragraph 1 of the notice states, "This form for annual report should be filled out in triplicate and two copies returned to the Interstate Commerce Commission, Bureau of Statistics, Washington, D. C., by March 31, 1940. Attention is especially directed to the following provisions of the Interstate Commerce Act." Paragraph 6, "Each respondent should make its annual report to this Commission in triplicate, retaining one copy in its files for reference in case correspondence with regard to such report be [fol. 725] comes necessary. For this reason copies of the form are sent to each corporation concerned."

Mr. Booth: At this point I desire to interpolate from the extract to govern the destruction of records of steam railroads prescribed by the Interstate Commerce Commission in accordance with section 20 of the Act to regulate commerce and to page 30 of the certified copy which is attached as the bottom document of defendant's exhibit No. 8 introduced in evidence in this case, I call attention to the portion of page 30 which reads, "Statistics 219. Reports to Interstate Commerce Commission and other regulating bodies."

(A) Annual financial, operating and statistical reports, filed copies of and supporting papers." Then in the column immediately adjoining, which column is headed "Period to be retained" is the word "permanently."

Q. Is it your understanding as a statistician that these filed copies which you used in making this report are the filed copies which the section of the regulations I have just read require to be retained permanently by the carrier?

A. That is my understanding, yes, sir.

Q. Have you with you and in the courtroom and available for the inspection of the plaintiff's counsel the file of [fol. 726] annual reports of the Great Northern Railway Company to the Interstate Commerce Commission on form A beginning with the year 1922 and including each year thereafter to and including the year 1939?

A. I have.

Q. Those are the calendar years, are they not?

A. Yes, sir.

Q. Those reports according to the footnote on defendant's exhibit No. 46 for identification are the source of the items shown in columns b, c, and d, is that correct?

A. That is correct.

Q. And columns e and f are averages which you statistically prepared, prepared as a statistician?

A. Yes, sir, the averages are computed on the basic figures shown in columns b, c, and d.

Q. The first five items appearing opposite the words in the first column "Total 1936-1939" and the five items appearing opposite the words in the first column "Total 1922-1925" are computations made by you from the figures above, are they not?

A. Yes, sir.

Q. And the percentage of improvement appearing in the last horizontal section of the exhibit headed "Per cent. of improvement" are also prepared by you?

[fol. 727] A. Yes, sir.

Q. Is this exhibit true and correct to the best of your knowledge?

A. It is.

Mr. Booth: Before I offer it are there any questions, Mr. Strauss?

Mr. Strauss: This is for the system as a whole?

A. Yes, sir.

Mr. Booth: We offer this in evidence as defendant's exhibit No. 46.

Mr. Strouss: We make the same objection.

The Court: The same ruling, the objection is overruled; it may be received in evidence.

The document referred to was received in evidence and marked defendant's exhibit No. 46.

Mr. Booth:

Q. ~~Mr. Burn~~, have you prepared an exhibit headed "Great Northern Railway Company, Freight Service Operating Averages, Calendar Years 1922, 1924, 1926, 1928, 1930, 1932, 1934, 1936, 1938, and 1939"?

A. I have.

Q. I will ask you first whether those years were selected by you or whether this form was sent you by counsel for the defendant, either directly or through one of your general offices, with the request that those years and no others be shown, or rather that those years be shown and without a request that any other years be shown?

A. Yes, sir, these are years we used at the request of counsel.

Q. You didn't select the years?

A. No, sir.

Mr. Booth: I will state for the information of the court that both exhibit No. 46 and this exhibit are on the same form as the preceding exhibit of the same character and as the exhibits which will follow and that we drew the form and selected the years and will show the relevancy of the years either later in the case or by argument. We didn't think it was necessary and I will say at this time we have an exhibit embracing the entire spread because it is merely a trend exhibit. We ask that this be marked as defendant's exhibit No. 47 for identification.

The Clerk: Defendant's exhibit No. 47 for identification.

Mr. Booth:

Q. I show you attached to defendant's exhibit No. 9, on top of which is a certificate of the secretary of the Interstate Commerce Commission, two forms, one printed in the upper right-hand corner "Form OS-A."

[fol. 729]. The Court: What do those letters stand for?

Mr. Booth: Operating statistics, form A, is that correct?

A. Yes, the title of the statement is "Freight Train Performance."

Mr. Booth:

Q. What do the letters "OS-E" on the other form stand for?

A. That is operating statistics, form E, entitled "Fuel and Power for Locomotives and Rail Motor Cars."

Q. I call your attention to the footnotes on defendant's exhibit No. 47 for identification and ask you whether they correctly state the sources from which you derived the items in the exhibit as shown in the footnotes?

A. Yes, they do.

Q. Have you with you in the courtroom and available for counsel's inspection if he desires the forms OS-A and OS-E used in making up this exhibit No. 47?

A. I have.

Q. You have already testified that you have the annual reports which form the basis for items 5 and 6 of this exhibit?

A. I have, yes, sir.

Q. Item 10, "Gross ton-miles (Exclusive of locomotives [fol. 730] and tenders) per ton of fuel" is a computation, is it not?

A. Yes, sir, as described in the note at the bottom of the page.

Q. Is this exhibit true and correct and correctly represent the information contained in the sources stated and the computations made as described to the best of your knowledge and belief?

A. It is.

Q. This exhibit you personally prepared?

A. Yes, sir.

Mr. Booth: We tender the annual reports and the forms OS-A and OS-E as described in the exhibit to counsel for his examination at his convenience. They are here in the courtroom and we offer the exhibit subject to that tender in evidence as defendant's exhibit No. 47.

Mr. Strouss: The same objection as to the previous exhibit.

The Court: The objection is overruled, it may be admitted.

The document referred to was received in evidence and marked defendant's exhibit No. 47.

The Court: Mr. Strouss, you are not raising the precise objection that this is a triplicate copy rather than a duplicate [fol. 731]—original filed with the Interstate Commerce Commission?

Mr. Strouss: Oh, no, I don't think that would be sound, if the court please, because this is a true record of the company.

The Court: Which they are required to keep under the law.

Mr. Strouss: Yes, I don't make any point of it being one of a triplicate.

Mr. Booth: The reason I had him read the inside cover and the reason I read the rules governing the destruction of records is that the Interstate Commerce Commission regards it as a record of the company.

The Court: All right.

Mr. Booth:

Q. Mr. Burn, will you return to exhibit No. 46. Have you some computations you have made showing some percentage relationships of figures in that exhibit and if so will you read them?

A. I have made the following additional computations, referring to column (b) it will be noted that the revenue ton-miles in 1922 were 6,882,464,797 and in 1939—

The Court: (Interrupting) Mr. Burn, may I suggest that you just read the first four figures leaving off the last six, [fol. 732]—I think it will be more readily followed.

A. (continuing) In 1939 the revenue ton-miles were 8 billion, 681 million plus, an increase of one billion, 797 million or 26 per cent; in column (c) the freight operating expenses for 1922 were 57 million, 943 thousand dollars, and in 1939 46 million, 396 thousand dollars, a decrease of 11 million, 547 thousand dollars or 20 per cent; in column (d) freight transportation expenses, in 1922 were 30 million, 859 thousand dollars and in 1939, 22 million, 055 thousand dollars, a decrease of eight million, 804 thousand dollars.

or 29 per cent; referring to column (e) freight operating expenses for one thousand revenue ton-miles in 1922 this average was \$8.42 and in 1939, \$5.34, a decrease of \$3.08 or 37 per cent, and in column (f) the freight transportation expenses, in 1922 were \$4.48 and in 1939 \$2.54, a decrease of \$1.94 or 43 per cent.

Mr. Booth:

Q. Mr. Burn, will you take your copy of the annual report to the Interstate Commerce Commission for the year ending December 31, 1939, and let me have your photostatic duplicate of it please. You have a photostatic duplicate of it, have you not?

A. Yes, I can use either one.

Q. Well, suppose you take the original. There is a part [fol. 733] of this report, a form prescribed by this report beginning at Page 512 of this report, and as a part of the form furnished by the Commission, Schedule 541, which runs through and including Page 519 and that is headed "Revenue Freight Carried during the Year"; into what groups is that revenue freight classified?

A. It is classified according to the following general groups: Products of Agriculture; Animals and Products; Products of Mines; Products of Forests and Manufactures and Miscellaneous, that relates to carload traffic and then another group is given for less-than-carload freight.

Q. Less-than-carload freight is not and cannot be measured by cars, can it?

A. No, sir.

Q. That is measured in tons?

A. That is correct.

Q. Will you first read in carloads the total revenue freight carried during the year from Line 850 on Page 519 and the number of carloads?

A. The number of carloads of freight carried in 1939 were 783,289.

Q. Follow me and correct me if I am wrong. In Group 1, Agriculture, the number of carloads was 159,944?

A. That is correct.

[fol. 734] Q. Group #2, Animals and Products, the number of carloads was 34,856 and in Group No. 3, Products of Mines, 336,636 of which how many carloads were iron ore?

A. Under "Products of Mines" the Great Northern reported in 1939, 226,431 carloads of ore handled.

Q. With a total tonnage of how much?

A. As compared with the total tonnage of Products of Mines—

Q. No, pardon me, what is the total tonnage of the iron ore?

A. The total tonnage of the iron ore was 15 million, 118 thousand 701.

Q. Without taking the time to do it, it is true, is it not, if you divide the 15 million figure just given by the 226 thousand figure you have the average loading per car?

A. Yes sir, approximately 70 tons.

Q. Group No. 4, Products of Forests, how many carloads?

A. A total of 93,579.

Q. Group 5, Manufactures and Miscellaneous?

A. Total of 158,274 cars.

Q. And less-than-carload freight in tons?

A. 279,060 tons.

Mr. Booth: You may take the witness.

[fol. 735] Mr. Strouss: Do those include freight which originated on roads other than the Great Northern?

A. Yes, sir, it would.

Mr. Booth: This report is sub-divided, is it not, into revenue freight originating on respondent's road and revenue freight received from connecting carriers?

A. Yes sir.

Q. And each of those classifications is again divided into revenue freight terminating on the line and revenue freight delivered to the connecting carriers?

A. Yes sir.

Mr. Booth: Here is the report, Mr. Strouss.

Mr. Strouss: I just wanted to ask that one question as to whether it was freight originating on the line or on lines other than the Great Northern. I have one or two general questions and I would like to have a chance to look at these annual reports.

The Court: Were you through with the Direct Examination, Mr. Booth?

Mr. Booth: Yes, Your Honor.

[fol. 736] Cross-examination.

Mr. Strouss:

Q. You were with the United States Railway Administration you testified?

A. Yes Sir.

Q. When were the railroads returned to the companies, do you remember?

A. I think it was about March 1st, 1920.

Q. A month after that you went with the Great Northern?

A. That is right.

Q. For a period of about seven months I believe the railroads were operated under a guarantee from the Government?

A. That is correct.

Q. The period of government ownership was a period of rather high operating expenses, wasn't it?

A. Yes, I would say it was, due to the war.

Q. And the effect of that carried over into the first year or two years following the return of the railroads to private ownership?

A. We probably were feeling some of the effects one or two years later. However, may I say one thing in regard [fol. 737] to Exhibit No. 46. In order to overcome any abnormal conditions in one year we have taken the four years, 1936 to 1939 inclusive and compared them with the four years 1922 to 1925 inclusive.

Mr. Strouss: Perhaps I should have withheld that question to some witness who had not been in the government railroad administration.

Q. I notice here that the reduction in mileage as shown by Exhibit No. 47 and I was rather interested in knowing what the cause of the reduction in mileage operated. Is that due to abandonment of unprofitable branch lines in part or in whole?

A. I would say that a good percentage of that decrease was due to the abandonment of unprofitable mileage in accordance with the permission granted by the Interstate Commerce Commission.

Mr. Strouss: I think those are all the questions I wish to ask at this time.

Mr. Booth: No further questions.

The Court: You may be excused, not permanently but subject to further cross-examination.

[fol. 738] C. G. GREGORY was called as a witness in behalf of the defendant and being first duly sworn, testified as follows:

Direct examination.

Mr. Booth:

Q. Will you state your name and residence to the Reporter please?

A. C. G. Gregory, St. Paul, Minnesota.

Q. Are you employed by the Northern Pacific Railway Company?

A. Yes, sir.

Q. In what capacity?

A. Assistant Statistician.

Q. How long have you been employed in that capacity?

A. About 12 years.

Q. As part of your duties as Assistant Statistician do you customarily resort to source data and prepare exhibits for presentation here and testify before courts and commissions.

A. Yes, sir.

Q. Do you have access to the files and records of the Northern Pacific?

A. Yes, sir.

Q. Before that time in what capacity were you employed [fol. 739] by the Northern Pacific.

A. I was Chief Clerk in the Statistical Department for nine years.

Q. And immediately prior to that time?

A. I held various positions in the Accounting Department for about ten years I should say.

Q. Did you hear the testimony of Mr. Burn who preceded you on the stand?

A. Yes, sir.

Q. Are you familiar with the system of annual reports described by him?

A. Yes, sir.

Q. Are you familiar with the system of operating statistical reports described by him?

A. Yes, sir.

[fol. 740] Q. And do you agree with his testimony in that respect?

A. Yes, sir.

Mr. Booth: I take it, Mr. Strouss, it will be unnecessary to go all over this.

Mr. Strouss: No, I am raising no question as to that.

Mr. Booth: Have you prepared an exhibit entitled "Northern Pacific Railway Company, Freight Operating and Freight Transportation Expenses Related to Traffic, Calendar years 1922 to 1939, inclusive"?

A. Yes, sir.

Q. And is the source of that exhibit stated in the bottom line of that exhibit?

A. That is correct.

Q. And the source is the annual reports of the Northern Pacific Company to the Interstate Commerce Commission?

A. Correct.

Q. That has also been referred to as Form A.

A. Yes, sir.

Q. Have you the reports of the Great Northern Railway — the Northern Pacific Railway Company to the Interstate Commerce Commission for the years 1922 to 1939, both [fol. 741] years inclusive, here in the court room?

A. They are in the court room.

Q. And on the table beside you?

A. Yes, sir.

Q. And available for examination?

A. Yes, sir.

Q. Are those books and reports I have just mentioned on the form prescribed by and furnished by the Interstate Commerce Commission for the Northern Pacific Railway Company?

A. That is right.

Q. And they are the file copies of the Northern Pacific Railway Company's annual reports for those years?

A. They are.

Mr. Booth: We ask that this exhibit be marked.

(The document referred to was marked "Defendants' Exhibit 48 for Identification.")

Q. This Exhibit 48 for Identification, you say was prepared by you?

A. It was.

Q. Were the entries in Columns B, C and D in this exhibit opposite the years 1922 to 1939, respectively, entirely taken without change from the corresponding figures in the Northern Pacific Railway Company's annual reports [fol. 742] to the Interstate Commerce Commission for the years named?

A. Correct.

Q. Are the computations in the three horizontal columns beginning immediately under the line preceded by the figures 1922, and also in Columns E and F, computations made by you?

A. That is right.

Q. Are those computations true and correct?

A. Yes, sir.

Mr. Booth: Any questions, Mr. Strouss?

Mr. Strouss: No.

Mr. Booth: We offer the exhibit in evidence as Defendants' Exhibit No. 48.

The Court: The same objections I presume?

Mr. Strouss: Yes.

The Court: The same ruling.

(The document referred to was received in evidence and marked "Defendants' Exhibit No. 48.")

Mr. Booth: Mr. Gregory, you heard Mr. Burn's testimony as to Forms O. S. A. and O. S. E., did you not?

A. I did.

Q. Have you in part from those forms and in part from the annual reports I have referred to for 1922 to 1939, prepared an exhibit entitled "Northern Pacific Railway Company, Freight Service Operating Averages, Calendar Years 1922, 1924, 1926, 1928, 1930, 1932, 1934, 1936, 1938 and 1939."

A. I have.

Q. Were those years selected by you or by any official of your company, or were they the years for which those figures were requested by counsel for the defendant in this case?

A. They were the years as requested by counsel for defendant in this case.

Q. The form being furnished to you by them?

A. That is right.

Q. Are the sources which you drew from for this exhibit correctly stated in the five foot-notes at the bottom of the exhibit?

A. Yes, sir.

Q. And is the formula by which you have calculated Item 10 correctly stated in the bottom foot-note?

A. Yes, sir.

Q. Have you with you present in the court-room and on the table beside you the forms OS-A and OS-E, file copies of the Northern Pacific Railway Company of the forms OS-A and OS-E, which were used in the preparation of this exhibit?

A. Yes, sir.

Q. Those are reports required by the Commission to [fol. 744] be made annually?

A. That is correct.

Q. You are quite familiar with the method of preparing them and the reports themselves?

A. I am.

Q. Are the figures shown—I don't think I have offered this for identification. We offer it.

(The document referred to was marked "Defendant's Exhibit 49 for Identification.")

Q. Are the figures shown in Defendant's Exhibit 49 for Identification correctly abstracted without change from the sources shown in the footnotes to that exhibit?

A. Yes, sir.

Q. And are the computations made in the exhibit correct computations from those figures?

A. They are.

Q. Column M is a computation made by you, is it not?

A. Yes, sir.

Q. Column 10 is a computation made by you, is it not?

A. As indicated in the foot-note.

Q. Line 10 I should say, that is a computation made by you?

A. Yes, that is right.

[fol. 745] Q. Otherwise the figures shown in Columns C to L, inclusive, are taken without change from the sources indicated?

A: They were except where it was necessary to make calculations as indicated in the foot-notes.

Q. That would relate to items 5, 6, 9 and 10?

A. Yes, sir, that is right.

Mr. Booth: We offer to allow inspection and examination of these forms OS-A and OS-E in addition to the reports, and ask counsel if he has any questions before offering the exhibit.

Mr. Strouss: This question I would like to ask. It probably doesn't go to the matter of the admissibility of the exhibit. I just want to find out the variation in mileage, if you don't mind, here. I notice in 1926, mileage was 6,510, and then in 1932 came down to 6,397, and then you have an increase again. Do you know why that was, Mr. Gregory?

A. Well, part of that change is due to abandonments, and there has been some increase—I just cannot now recall what that increase is—in between 1932 and 1939, increase of approximately 26 miles. Yes, that covers trackage rights which we acquired over a certain piece of track from another carrier.

[fol. 746]. Q. Main line operation?

A. No, branch line.

Mr. Booth: This mileage includes miles leased and operated as well as miles owned, does it?

A. Yes, that includes all the mileage operated in freight train service whether owned or leased from others.

Mr. Booth: We offer this in evidence as Defendant's Exhibit 49.

Mr. Strouss: The same objection.

The Court: Same ruling. It may be admitted in evidence.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 49.")

The Court: We will take a brief recess at this time.

Thereupon, a short recess was taken, after which the witness Gregory was recalled to the stand and proceedings were resumed as follows:

Mr. Booth: Will you take the Annual Report on Form A of the Northern Pacific Railway Company for 1939 and turn to Schedule 541, beginning on page—what is it, 512?

A. 512.

Q. 512, being the same schedule about which I questioned Mr. Bura. I will ask you first to turn to the end [fol. 747] of the schedule on page 519, and give me the total number of tons of carload traffic carried in the year 1939, total number of carloads of revenue freight carried in the year 1939.

A. Total number of carloads of revenue freight carload traffic only, is 518,457.

Q. And the total number of tons represented by those carloads?

A. 16,918,783.

Q. What total number of tons of less than carload freight?

A. 210,248.

Q. Now, turning back to page 512, and what was the total number of carloads of revenue freight under Group 1, Products of Agriculture?

A. That figure is found on page 513, and is 116,896.

Q. Will you take the report and add up the number of carloads of lemons, limes and citrus fruits, fresh apples, bananas, berries, fresh, cantaloupes and melons, grapes, fresh, fresh peaches, watermelons, fruits, fresh, domestic, fruits, fresh, tropical, potatoes other than sweet, cabbage, onions, tomatoes, and fresh vegetables, and oranges and grapefruit, in lines 110 to 143; and tell me how many car- [fol. 748] loads of perishables moved in 1939 over your line?

The Court: I presume, Mr. Booth, there will be offered in evidence a map showing the territory served by the Northern Pacific.

Mr. Booth: They are of record here by the witness W. W. Judson, our general manager, who was here this morning and received a telegram that his mother was very seriously ill and he had to leave on the plane. I will introduce it now by this witness, if you have it.

The Court: Well, it is a little easier to understand the testimony if we know what territory they operate in.

Mr. Booth: Have you made the computations?

A. Yes, sir. The total number of carloads handled, classes 110 to 143, inclusive, was 32,206.

Q. Those classes are shown on page 512 of Form A attached to Exhibit 9, already in evidence?

A. May I correct you on that, Mr. Booth. The classes are shown on 512, but the figures I read are shown on page 513.

Q. I will show you an exhibit, Mr. Gregory, which consists of a map entitled, "Northern Pacific Railway Company," and will ask you to examine it and state whether that is an outline map of the territory served by the Northern Pacific Railway Company, and the main and branch lines of that company, to the best of your knowledge and observation.

A. Yes, that appears to be substantially correct.

Q. That is a reasonably accurate presentation?

A. Yes, sir.

Mr. Booth: We offer that in evidence as Defendant's exhibit, the next number for identification; we will prove it by our operating witness of the Northern Pacific.

Q. Did you give the total number of tons of products of agriculture carried during the year?

A. No, I didn't. The total number of tons of Agricultural Products is 3,702,907.

Q. Will you give the total number of cars and tons in Group 2: Animals and Products?

A. Animals and Products, total carloads, 26,995; tons, 343,975.

Q. And the predominating movement of animals is that of cattle and calves, is it not?

A. Yes, sir.

Q. Will you give the total number of tons of Products of the Mines, and the total number of cars?

A. Total number of carloads of Products of the Mines: 99,058, the corresponding tons being 4,206,279.

[fol. 750] Q. What is the predominating mineral product that was carried during that year?

A. Bituminous coal.

Q. What did that amount to in carloads?

A. 55,815.

Q. Did that originate on your lines?

A. A little less than half of it originates on our lines, the balance being received from connections.

Q. Group 4, what were the tons and cars, Group 4, Products of Forests, cars and tons?

A. Total number of cars under Products of Forests, 134,458, and the number of tons 4,658,777.

Q. And the predominating product of the forests was what?

A. As to cars and tons, the predominating commodity was logs.

Q. How many cars?

A. 69,364.

Q. And the next predominant?

A. Lumber, shingles and lath, account for 46,064.

Q. Group 5, Manufactures and Miscellaneous, what were the cars and tons in that group?

A. Total number of cars, 141,050; tons, 4,006,845.

[fol. 751] Mr. Booth: That is all. You may cross-examine.

Mr. Strouss: I have no questions until I have examined those books. What was the tons of products of mines?

A. Total products of mines?

Q. Yes.

A. Tons did you say?

Q. Yes.

A. 4,206,279.

W. M. BURN was recalled to the stand and testified further as follows:

Direct examination (Continued):

By Mr. Booth:

Q. Mr. Burn, will you take your Great Northern Railway Company Annual Report for 1939, and state the total number of carloads of fresh fruits and vegetables in lines 110 to 143, inclusive, on page 512, the number of cars of those handled in 1939 according to Column J on page 513?

A. I have just made the total of those items and it amounts to 45,024 cars.

Q. Now, what is the predominant item handled and how many carloads was handled?

A. According to the Annual Report, the predominant item is potatoes, other than sweet, amounting to 18,624 cars; [fol. 752] and the next most important item is apples, amounting to 15,059 cars.

Mr. Strouss: How many cars of potatoes, Mr. Burn?

A. 18,624.

Mr. Booth: And oranges and grapefruit?

A. Oranges and grapefruit amounted to 2,990 cars.

Q. And, finally, for the purpose of this question, would the next one be peaches?

A. The next important would be fruits, fresh, domestic, 2,717 carloads.

Q. How many carloads of apples originated on your line?

A. There was a total of 14,425 carloads originated.

Mr. Booth: That is all. Any questions, Mr. Strouss?

Mr. Strouss: No.

Mr. Booth: I will ask Mr. Siddall to take the stand.

[fol. 753] H. H. SIDDALL was called as a witness on behalf of the defendant and, being first duly sworn, testified as follows:

Direct examination.

By Mr. Booth:

Q. Will you state your name and residence to the reporter?

A. H. H. Siddall, Chicago, Illinois.

Q. And your position with what railroad company?

A. I am Assistant Statistician in the office of the General Auditor of the Trustees of the Chicago, Rock Island and Pacific Railway Company.

Q. Were you connected with the company before its trusteeship? If so, in what capacity?

A. Yes, sir, I was assistant statistician from 1935 to 1940, and prior to that held various positions in the Statistical Department back to 1922, and from 1919 to 1922 I was traveling accountant in the corporation office as distinct from the railroad administration. Prior to 1918, I was in the real estate and tax department and the tie and timber department of the Rock Island.

Q. When you say you were traveling auditor for the corporation, you mean the corporate structure was maintained during public control of railroads, and instead of going with [fol. 754] the Director General of Railroads you remained with the railroad.

A. That is correct; audited various matters between the railroad and the corporation.

Q. Your headquarters also covers the operations of the Chicago, Rock Island and Gulf Railway?

A. They do, since September 1, 1939, when the properties of the Chicago, Rock Island, Gulf Railway Company were leased and operated by the Chicago, Rock Island Pacific Railway Company.

Q. As assistant statistician for the trustees of the Rock Island, and also when you were assistant statistician for the corporate owner and operator, were you required and did you make studies of operating statistics?

A. Yes, quite frequently.

Q. Are you familiar with the reports to the Interstate Commerce Commission and their method of construction?

A. I am, yes, sir.

Q. May I ask you here, is the report to the Interstate Commerce Commission on Form A made out by one man or the product of a number of departments?

A. The information comes from various departments and is assembled in the book, and there are quite a few men employed [fol. 755] assembling the information in the various departments of the railroad.

Q. The same is true of the OS-A to a more limited extent?

A. The OS-A's are taken from several departments, yes.

Q. Did you hear the testimony of Mr. Burn, who was on the witness stand this afternoon here, regarding the character of records afforded by the office file copies of the Form A and Forms OS-A and Form OS-E?

A. I did.

Q. Did you agree with him in his statements regarding them?

A. Yes, I do.

Q. Have you prepared an exhibit for the purposes of this case, entitled "Rock Island Lines (The Chicago, Rock Island and Pacific Railway Company) (The Chicago, Rock Island Gulf Railway Company) Freight Operating and Freight Transportation Expenses Related to Traffic, Calendar Years 1922 to 1939, Inclusive"?

A. Yes, sir, I have.

Q. Have you that exhibit before you?

A. I have.

Mr. Booth: We ask that this be marked Exhibit 51 for [fol. 756] Identification.

(The document referred to was marked by the Clerk "Defendant's Exhibit No. 51 for Identification.")

Q. Now, from what source or sources were the figures in Columns B, C and D for the years 1922 to 1939, inclusive, as shown on this exhibit, secured by you?

A. They were taken from the Annual Report, Form A, of the two companies separately, the Chicago, Rock Island and Pacific Railway Company, and, separately, the Chicago, Rock Island Gulf Railway Company. The figures shown thereon are the combined figures for each year.

Q. Was there a report for each of those companies on Form A to the Interstate Commerce Commission for each of the years 1922 to 1939, inclusive, or only during part of those years?

A. There is a separate report for each company for each of the years. The year 1939, report for the Chicago, Rock Island Gulf Railway Company includes only the first eight months of 1939 because September 1, 1939, they leased their properties to the Chicago, Rock Island and Pacific Railway Company.

Q. But the entire operations on those rails for the re-[fol. 757] maining four months are included in the lessee company's report?

A. They are included in the report of the Chicago, Rock Island and Pacific Company, so the name Rock Island Lines covers the operations of the entire system.

Q. Are both of those companies in trusteeship?

A. Both are in trusteeship, yes, sir.

Q. With the same trustee?

A. With the same trustee.

Q. And the same operating, accounting and other organizations?

A. That is correct.

Q. Have you with you all of the Annual Reports of those two companies to the Interstate Commerce Commission on Form A for the years 1922 to 1939, inclusive?

A. I have them here in the court room.

Q. Are the figures in Columns B, C and D, to which I have referred in a previous question, correct consolidations of the corresponding items in the two reports of the two companies for the years shown?

A. Yes, sir, they are correct.

Q. That is, none of these figures appear in any one report, but each set of figures is a consolidation from the two reports [fol. 758] ports?

A. That is correct.

Q. Were the averages shown in Columns E and F computed by you?

A. They were.

Q. Are those correct?

A. Those are correct, yes, sir.

Q. Were the computations in the three horizontal blocks beginning with the totals of 1936 and 1939, made by you?

A. Yes, sir.

Q. Are those correct?

A. Those are correct.

Mr. Booth: We offer this in evidence as Defendant's Exhibit 51, and tender examination of the source data of it, Forms A, to counsel as in the case of the other exhibits.

Mr. Strauss: The same objection.

The Court: The same ruling. It may be admitted in evidence.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 51.")

Mr. Booth: Have you prepared and have you with you an exhibit entitled "Rock Island Lines (The Chicago, Rock Island and Pacific Railway Company) (The Chicago, Rock Island and Gulf Railway Company) Freight Service Operating Averages, Calendar Years 1922, 1924, 1926, 1928, 1930, 1932, 1934, 1936, 1938 and 1939."

A. I have.

Q. Are the sources from which the figures in this exhibit other than computations in Column M, correctly stated in the five foot-notes at the bottom of the exhibit?

A. Yes, sir, that is the correct statement of the source of the figures.

Q. In preparing this exhibit, according to the foot-notes, you had, according to Items 1, 2, 3, 4, 7 and 8, Reports of Freight Train Performance, Form OS-A, filed with the Interstate Commerce Commission?

A. That is correct.

Q. Were those reports filed separately for the years shown on the exhibit by the two companies named?

A. No, they are a combined report filed with the Commission, which, with the permission of the Commission, we have been doing for some years.

Q. Including the year 1922?

A. That is correct, including 1922, all those will have one figure for the combined two roads, and will be found on file with the Commission on Form A.

[fol. 760] Q. So that the items mentioned in the first line of the foot-note are taken verbatim from the form OS-A filed as the one report, you mean?

A. That is correct.

Q. Item 5, is that taken from the separate reports of the companies to the Interstate Commerce Commission for each of the years?

A. Yes, the total traction effort of each company is taken from each of the two reports and added together, and then total steam locomotives available for service at the close of the year is taken from each of the two Annual Reports, added together and the first figure divided by the second figure to arrive at the amount shown on Item 5, so that in effect it is an average for both companies.

Q. Was the same method pursued as to adding items in the report when you prepared the figures shown in Item 6?

A. Well, in the same identical manner.

Q. The formula is stated correctly there as to equipment?

A. Yes.

Q. Item 9, does that also come from the consolidated Form OS-A by the formula you describe?

A. Yes, sir.

Q. Take the net ton-miles and divide them by train [fol. 761] hours and the product is Item 9?

A. That is right.

Q. Item 10, the formula is given there, and that has been applied in part to Form OS-A, items down to and including the year 1934, and for the years 1936, 1938 and 1939, two items in the Annual Report, is that correct?

A. That is correct, yes; sir.

Q. Have you all of the Form OS-A's with you that were used in making up this report?

A. Yes, I have all of the OS-A forms here.

Q. The file copies of the company?

A. Yes, sir.

Q. From the accounting records of the company?

A. Yes, sir. I would like to state one thing here in regard to this report.

Q. Do you desire to make a correction on the face of the exhibit as it has been handed to the Clerk?

A. Yes. I would like to correct three figures there on Item 10 in Column K under the year 1938. The entry now reads 13,253. That should be changed to 13,331. The same line, No. 10, Column L, for the year 1939, the figure now reads 14,049, should be changed to 14,140. The last column on Item 10, Column M, showing per cent of increase of [fol. 762] 1939 over 1922, now reads 43.9, should be changed to 44.8.

Q. You discovered this in rechecking the exhibit, did you?

A. Yes, we discovered this in a recent rechecking of the exhibit.

Q. You can explain, if counsel desires, the reason for the change?

A. Yes, sir.

Mr. Booth: We ask the Clerk to make the correction on the face of the exhibit and put your initials on it, please, Mr. Clerk.

The Court: You may make the correction on the face of Exhibit 52 for Identification.

Mr. Booth: Any questions, Mr. Strauss?

Mr. Strauss: I was going to ask Mr. Siddall the same question about mileage.

Mr. Booth: Suppose you let me offer it first.

Q. Mr. Siddall, is this exhibit, with the correction you have made, true and correct to the best of your knowledge and belief?

A. It is.

Q. Both in the absolute figures shown and in the computations there contained?

A. That is correct.

Mr. Booth: We offer this in evidence as Defendant's Exhibit 52.

[fol. 763] Mr. Strauss: The same objection.

The Court: It may be admitted in evidence. Objection overruled.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 52.")

Mr. Booth: Perhaps Mr. Strauss could ask the same questions about this exhibit before I pass on to the tonnage.

Mr. Strauss: I just wanted to ask about the mileage. I notice in line 1 you had an increase in mileage up to 1932, and then there has been a decrease; that is correct, is it?

A. Yes, that is correct. A decrease since 1932 has been due largely to abandonment of branch lines or shortenings of main line through cut-offs, new cut-offs built.

Q. The abandonments were under the permission of the Interstate Commerce Commission where the lines were unprofitable, I take it.

A. Yes; we have had hearings on the subject and permission was given.

Mr. Booth: We have an operating witness in the court room for this company, assistant superintendent of transportation, whose testimony may not come on until tomorrow or the following day, but so the exhibits may be together, [fol. 764] I will ask to have marked for identification an outline map of the Chicago, Rock Island and Pacific Railway Company.

The Court: It may be marked.

(The document referred to was marked "Defendant's Exhibit No. 53 for Identification.")

Mr. Booth: Now, Mr. Siddall, will you take your 1939—I think I will ask this witness—

The Witness: I have added the figures together on commodities.

Mr. Booth: You have? Let me see it.

The Witness: The red figures are the combined totals of groups.

Mr. Booth: I assume that counsel will want the same privilege of time for preparing for cross-examination that he desired in the case of the other witnesses?

Mr. Strauss: Yes.

Mr. Booth: And I want to put in some figures on commodities just taken from the report, and I prefer to do it in the morning. I can put them in in a more condensed form. Mr. Siddall just got here today. The figures are all in the reports and you can verify them as they go in from the reports. With that exception I will close my direct examination, with the privilege of recalling him in the morning.

[fol. 765] The Court: No cross-examination at this time?

Mr. Strouss: Not at this time.

The Court: Step aside. Call your next witness.

Mr. Booth: Let the record show that we have tendered to counsel for the plaintiff the reports used by the witness in preparing these two exhibits.

[fol. 766] G. W. OAKLEY was called as a witness in behalf of the defendant and being first duly sworn, testified as follows:

Direct examination.

Mr. Booth:

Q. Will you please state your name and residence to the Reporter?

A. G. W. Oakley; Cleveland, Ohio.

Q. By what railroad company are you employed?

A. Erie Railroad Company.

Q. In what capacity?

A. General Accountant.

Q. How long have you been employed in that capacity?

A. Since September 1st, 1936.

Q. In the office of the General Auditor?

A. In the office of the Comptroller.

Q. Prior to your occupying that position in what capacity were you employed and by whom?

A. Three years prior to that date I was employed as Chief Clerk to the President of the Erie Railroad Company and prior to that back to 1911 in various capacities in the Accounting Department of the Erie Railroad Company.

Q. In your present capacity is it your daily and constant [fol. 767] work to have to do with the preparation, inspection and comparison of statistical summaries of various kinds?

A. It is.

Q. Including summaries of operating expenses?

A. Yes sir.

Q. Performance of various units of operation?

A. Yes sir.

Q. Are you familiar with the system of reports by companies to the Interstate Commerce Commission which

have been described here as the Annual Report Form A, and forms OS-A and OS-E?

A. I am.

Q. Have you used them frequently in your own work?

A. I have.

Q. Did you hear the testimony of Mr. Burn given today?

A. I did.

Q. Regarding the annual reports of OS-A's and OS-E's and their maintenance as a filed copy in the general office of the company?

A. I did.

Q. Confining your agreement to that general testimony do you agree with his testimony?

A. I do.

[fol. 768] Mr. Booth: I hope counsel will accept that as a qualification.

Mr. Strouss: Yes, that is all right.

Mr. Booth:

Q. Is the Erie Railroad Company in trusteeship?

A. It is.

Q. Is the Chicago and Erie Railroad Company in trusteeship?

A. It is not.

Q. Does the same comptroller and the same accounting office handle the accounts of both of those companies?

A. He does.

Q. How long has the Erie Railroad been in trusteeship?

A. Since January 18, 1938.

Q. Prior to that time did it report annually to the Interstate Commerce Commission on Form A?

A. It did.

Q. Have you copies of those reports in the courtroom with you?

A. I have.

Q. Do you know and if not can you ascertain by looking at the report, by whom the 1937 report was prepared? Was it by the trustees or by the corporate officials?

[fol. 769] A. I would have to examine the report on that.

Q. Perhaps you can do so over night and tell us in the morning?

A. I will.

Q. But since the trusteeship the accounting officer for the trustees, chief accounting officer for the trustees has made these reports, has he?

A. He has.

Q. The trustees are trustees under an order of the Federal Court?

A. Yes sir.

Q. The Chicago and Erie Railroad Company you say is not in trusteeship?

A. No sir.

Q. Has that company each year from and including the year 1922 to and including the year 1939 filed annual reports on Form A?

A. On Form A they filed reports to and including the year 1933.

Q. And after that year?

A. Effective January 1st, 1934 a consolidated report was filed for the Erie Railroad Company including the Chicago and Erie Railroad Company.

Q. In the trusteeship do the trustees and the Chicago and Erie Railroad Company continue to file a consolidated report?

A. They do.

[fol. 770] Q. One as a corporation and the other as officers of the court, that is, the trustees file it as officers of the court and the Chicago and Erie Railroad Company files it as a corporation?

A. It is a joint report.

Q. As to Forms OS-A and OS-E what is the history of those forms from 1922 to 1939 inclusive?

A. They have always been filed as one report for the Erie Railroad Company including the Chicago and Erie Railroad Company.

Mr. Booth: I offer for identification only and ask to have it marked as Exhibit No. 55 the map showing in outline the territory and the lines of the Erie Railroad Company which will be fully identified and testified to by a subsequent witness, merely for identification.

The Court: It may be marked.

(Document marked Defendant's Exhibit No. 55 for identification.)

Mr. Booth:

Q. Showing you this map I will ask you which of the lines shown on that map are the lines of the Chicago and Erie Railroad Company if you know?

A. The line extending from Marion, Ohio to Hammond, Indiana.

Q. And the other is the Erie Railroad Company proper? [fol. 771] A. Yes sir.

Q. Referring to Exhibit No. 54 for identification, this exhibit insofar as concerns the figures in columns B, C and D which appear opposite the years 1922 to 1939 inclusive, was taken entirely, was it not, from the annual reports you have described and which you say you have in the court room here with you?

A. They were.

Q. And the computations in the vertical columns E and F and in the three horizontal blocks at the foot of the exhibit were made by you, were they not?

A. They were.

Q. Were the figures which were taken from the reports correctly transcribed by you from the reports?

A. They were.

Q. Were the computations you have made, have they been correctly made by you?

A. To the best of my knowledge, yes.

Mr. Booth: We offer this in evidence as Defendant's Exhibit No. 54.

(Mr. Strauss: The same objection of course.

Mr. Booth: We tender for examination the annual reports referred to by the witness in the same manner as the other reports have been tendered.

The Court: The objection is overruled and the exhibit may be admitted in evidence.

(Document received in evidence and marked Defendant's Exhibit No. 54.)

Mr. Booth:

Q. Have you also prepared a report entitled, "Erie Railroad Company, Robert E. Woodruff and John A. Hadden, Trustees, Chicago and Erie Railroad Company, Freight Service Operating Averages, Calendar Years, 1922, 1924, 1926, 1928, 1930, 1932, 1934, 1936, 1938 and 1939"?

A. I did.

Q. Do you have that before you?

A. I have.

Q. That was prepared by you, was it?

A. It was prepared under my direction, and I re-checked all of the figures.

Q. The form and the years for which the form was to be filled out were furnished by the defendant as you understand it?

A. That is correct.

Q. You had no selection of the years?

A. No sir.

Q. And expressed no opinion concerning them?

[fol. 773] A. No sir.

Q. As to Items 1, 2, 3, 4, 7 and 8, does the first foot-note show the source of those items?

A. It does, Freight Train Performance, Form OS-A.

Q. Have you those forms from which those items were taken in the courtroom with you?

A. I have.

Q. Item 5, Average tractive power per locomotive in pounds, was that prepared according to the formula and from the annual report as indicated in the foot-note?

A. It was.

Q. Item 6, Average capacity per freight car in tons, was that prepared according to the formula and from the schedule 417 in that report?

A. It was.

Q. Item 9, net ton-miles per freight train-hour. Was that prepared from the formula there stated, net ton-miles divided by train-hours as reported on Form OS-A to the Interstate Commerce Commission?

A. It was.

Q. And finally Item 10, was that prepared from the two respective sources described in the last foot-note on the exhibit?

[fol. 774] A. It was.

Q. The computations of percentages in column (m), are those true and correct?

A. To the best of my knowledge and belief they are.

Q. Is the exhibit to the best of your knowledge and belief true and correct?

A. It is.

Mr. Booth: Any questions, Mr. Strouss?

Mr. Strouss: No.

Mr. Booth: We offer this exhibit in evidence as Defendant's Exhibit No. 56.

Mr. Strouss: Same objection.

The Court: Same ruling; it may be admitted in evidence.

(The document referred to was received in evidence and marked Defendant's Exhibit No. 56.)

Mr. Strouss: Your deduction in miles of road operated I assume was due to the abandonment of branch lines or something of that sort?

A. It is; on account of no business the branch lines were abandoned.

Mr. Booth:

Q. Will you let me have the report for 1938, Form A, and you take the report for 1939 and turn to Schedule 541 beginning at page 512. Will you turn to Page 519 Column [fol. 775] J and state for the record the total number of carloads of revenue freight handled by the Erie Railroad Company and the Chicago and Erie Railroad Company on the combines report during the calendar year 1939?

A. 957,123 carloads.

Q. Tons, how many?

A. 32 million, 110 thousand plus.

Q. Tons of less than carload freight?

A. 722,043.

Q. The products of agriculture, Group 1, total number of carloads handled and tons handled?

A. Carloads 106,818; tons of two thousand pounds 2 million, 368,955.

Q. Group 2, animals and products?

A. Carloads 61,267; tons 871,034.

Q. The same information for Group 3 please?

A. Products of Mines, carloads 352,017; tons 18 million, 157,645.

Q. And the next group?

A. The next is Group 4, Products of Forests, carloads 29,872; tons 764,361.

Q. In the Products of Mines in Group 3 what was the predominating movement?

A. The predominating movement was anthracite coal, 132,596 cars.

Q. Next to that was what?

[fol. 776] A. Bituminous coal, 126,386 cars.

Q. And car loadings fell very rapidly to the third largest which was what?

A. Coke, 23,594 cars.

Q. And iron ore?

A. Iron ore 21,731 cars.

Q. Do you know from your experience and observation in the offices of the president and comptroller of the respective Erie whether that road is a very large carrier of perishables from Chicago to eastern distributing termini?

A. It is.

Mr. Booth: I think I can really save time by asking the witness to make some computations tonight which I can put in in the form of a total in the morning and have copied in the record and present it in a much more presentable form and much more graphic and I will do that during the adjournment. I merely want to ask as to the manufactures. What was the predominating carloading in manufactures?

Mr. Strauss: We don't have the totals on that, Mr. Booth.

Mr. Booth: What was the tons and cars on manufactures?

A. Manufactures, cars 407,149; tons, nine million, 947,533.

[fol. 777] Q. What was the predominating car loadings of cars handled in manufactures during that year? How was it classified?

A. Iron and steel, rated fifth class in the official classification. I assume you mean other than miscellaneous manufactures?

Q. Yes. That would be how many carloads?

A. 51,799.

Mr. Booth: I think that is all for the present?

The Court: The Court will be at recess until ten o'clock tomorrow morning.

(Thereupon at 4:15 p. m. December 3rd, 1940 the Court was at recess until 10:00 a. m. December 4, 1940.)

[fol. 778] 10 A. M., December 4, 1940.

All parties being present as heretofore noted, proceedings were resumed as follows:

G. W. OAKLEY resumed the witness stand for further

Direct examination.

Mr. Booth:

Q. Mr. Oakley, have you prepared overnight from the 1939 annual report of the Erie Railroad and Chicago and Erie Railroad to the Interstate Commerce Commission an excerpt from schedule 541?

A. Schedule 541, yes, sir.

Q. Showing the products of agriculture by classes or items 110 to 143 inclusive?

A. I did.

Q. These items 110 to 143 inclusive are continuous, are they not? In other words, you have not left out anything between 110 and 143?

A. No, sir.

Q. Is this correctly taken from your annual report?

A. It is.

Q. It shows, does it not, to what extent the Erie handles [fol. 779] freight received from connecting carriers either for delivery on its own line or to deliver to another railroad for transportation to the ultimate consignee?

A. It does.

Q. It also shows the tons of freight originating on the Erie road and either terminating on its own line or delivered to a connecting carrier for hauling beyond?

A. It shows the carloads, not the tons.

Q. Is this statement true and correct and are the items exact copies of the items in your report as they purport to be?

A. They are.

Mr. Booth: Any questions, Mr. Strouss?

Mr. Strouss: No questions.

Mr. Booth: We offer this in evidence as defendant's exhibit No. 51 and ask permission to have this photostated and substitute a photostat of the exhibit. Is there any objection to that?

Mr. Strouss: No.

Mr. Booth: We would like to have our exhibits uniform as far as possible and we only had time to make up a few copies last night.

Mr. Strouss: The same objection.

The Court: Objection overruled, it may be admitted in evidence.

[fol. 780] The document referred to was received in evidence and marked defendant's exhibit No. 57.

Mr. Booth: That is all, Mr. Oakley.

Mr. Strouss: I haven't had an opportunity yet to go over the reports. I will try to do that at noon.

Mr. Booth: We can call Mr. Oakley tomorrow.

Mr. Strouss: You beat me to one question I had in mind.

Mr. Booth: That is all, Mr. Oakley.

(Witness temporarily excused.)

F. H. MILLARD was called as a witness in behalf of the defendant and being first duly sworn testified as follows:

Direct examination.

By Mr. Booth:

Q. Will you please state your name and residence to the reporter?

A. F. H. Millard, St. Louis, Missouri.

Q. What position do you occupy with the St. Louis and Southwestern Railroad?

A. Comptroller and assistant to the chief executive officer.

Q. How long have you been connected with the company?

[fol. 781] A. A little over twenty years.

Q. In what capacities?

A. As assistant to the president and as comptroller and assistant to the chief executive officer.

Q. During the whole twenty years?

A. During the whole twenty years, yes.

Q. Prior to that time in what railroad service were you?

A. I was the assistant manager of statistical bureau, Western Railroads, in Chicago for five years, except that during Federal control I was in Washington as assistant to the director of traffic.

Q. Of the United States Railroad Administration?

A. Yes.

Q. Your railroad experience has extended over how many years?

A. About thirty. I was bridge engineer on the Chicago, Milwaukee, and St. Paul before going into the statistical bureau.

Q. What academic degree, if any, do you hold?

A. I have a degree of civil engineer, Master of Science, Bachelor of Arts.

Q. What college?

A. The civil engineer and Bachelor of Arts degrees at [fol. 782] the University of Colorado and Master of Science at the University of Illinois.

Q. Is the St. Louis and Southwestern Railroad frequently referred to as the "Cotton Belt"?

A. Yes, sir.

Mr. Booth: We offer for identification an outline map and ask that it be marked.

The Clerk: Defendant's exhibit No. 58 for identification.

Mr. Booth: This map, if the court please, will be further identified and offered during the examination of the operating witness for the road. I merely want to have the witness identify it as the road of which he is comptroller.

Q. I show you this outline map marked defendant's exhibit No. 58 for identification and ask you whether that shows an outline of the territory traversed and the lines of the St. Louis Southwestern Railroad?

A. Yes, it does.

Q. Have you prepared an exhibit entitled "St. Louis Southwestern Railway Lines, Berryman Henwood, Trustee, Freight Operating and Freight Transportation Expenses Related to Traffic, Calendar Years 1922 to 1939, Inclusive"?

A. Yes.

[fol. 783] Q. By the way, the St. Louis Southwestern is in trusteeship in the Federal court?

A. That is true.

Q. And Mr. Henwood is the trustee?

A. Yes.

Q. From what sources was this exhibit prepared?

A. It was prepared from the annual reports to the Interstate Commerce Commission on what is known as form A. For the years 1934 and subsequently the system report has been filed with that Commission, including both St. Louis Southwestern and St. Louis Southwestern Texas. Prior to that time two reports were prepared and the figures for 1933

and prior years were prepared on this exhibit by adding together the figures for the two reporting companies.

Q. I notice that the source note at the foot of the exhibit says, "Accounting records of the Company to and including year 1933." Are those accounting records the two sources of annual reports to the Interstate Commerce Commission which you have just described?

A. Yes.

Q. And have you those reports with you here in the courtroom?

A. Yes.

Q. They are on the table beside you?

[fol. 784] A. They are.

Q. Have you the annual reports to the Interstate Commerce Commission after the year 1933 and to and including the year 1939 with you and on the table beside you?

A. Yes.

[fol. 785] Mr. Booth: We offer this exhibit for identification.

The Court: It may be marked.

(Thereupon the document referred to was marked "Defendant's Exhibit 59 for Identification")

Mr. Booth: Now, are the figures in the columns B, C, and D which appear opposite the years 1922 to 1939, inclusive, either taken without change from the reports you have described, or the result of additions of figures taken without change from the reports you have described?

A. Yes, they are.

Q. They are correctly so transcribed?

A. Yes.

Q. And are the figures in columns E and F and in the three horizontal boxes at the bottom exhibit additions or computations as shown on the face of the exhibit?

A. Yes.

Q. And are those additions and computations correct to the best of your knowledge and belief?

A. Yes.

Mr. Booth: Any questions, Mr. Strouss?

Mr. Strouss: No, no questions.

Mr. Booth: We offer the exhibit in evidence as Defendant's Exhibit 59.

[fol. 786] Mr. Strouss: The same objection.

The Court: The same ruling. It may be admitted in evidence.

(Thereupon the document referred to was received in evidence and marked "Defendant's Exhibit No. 59")

Mr. Booth:

Q. Have you, Mr. Millard, prepared an exhibit entitled, "St. Louis Southwestern Railway Lines, Berryman-Henwood, Trustee, Freight Service Operating Averages, Calendar Years 1922, 1924, 1926, 1928, 1930, 1932, 1934, 1936, 1938 and 1939?"

A. Yes.

Q. And is this exhibit I hold in my hand the exhibit you refer to?

A. Yes, it is.

Mr. Booth: We ask that this exhibit be marked Defendant's Exhibit 60 for identification.

(Thereupon the document referred to was marked Defendant's Exhibit No. 60 for identification.)

Mr. Booth: Do the five notes at the foot of the exhibit correctly show the sources from which this exhibit was taken?

A. Yes.

Q. Did the railroads referred to in the title to the exhibit make reports to the Interstate Commerce Commission on that Commission's form OSA for the years shown in the exhibit?

[fol. 787] A. Yes.

Q. Were those OSA reports separate for the two roads or consolidated, or partly one and partly the other?

A. Partly one and partly the other. There were separate reports for the St. Louis & Southwestern and St. Louis & Southwestern of Texas for 1933 and prior. Subsequent to that time there was a system report filed, including both companies.

Q. Are the file copies of those reports in your custody as Comptroller of the Company?

A. Yes, sir.

Q. Did you bring with you the OSA reports referred to insofar as they relate to show the figures used for preparing this exhibit and the figures shown on the exhibit?

A. Yes, I have them all.

Q. Will you show the court by reference to the map marked 58 the identification of the lines of the St. Louis Southwestern of Texas?

A. All lines within the state of Texas are operated by the St. Louis Southwestern of Texas. All the rest is operated by the St. Louis Southwestern Railway Company.

Q. That, I assume, is because of a Texas law which requires the railways of Texas to be domestic corporations? [fol. 788]

A. I so understand.

Q. Turning to Defendant's Exhibit 60 for identification, do the notes to the exhibit correctly show the sources of the figures shown in the exhibit and the formula by which items 5, 6, 9 and 10 were computed?

A. Yes.

Q. Column M is a computation, is it not?

A. Yes, sir.

Q. Are the figures in the exhibit correctly abstracted where there are figures appearing as such on the face of the reports described in the footnotes, and have the computations been correctly made?

A. Yes.

Q. Is that true and correct to the best of your knowledge and belief?

A. Yes.

Q. I will ask you, were these years shown in the exhibit selected by you or used at the request of the defendant?

A. They were used at the request of the defendant.

Mr. Booth: Any questions, Mr. Strouss?

Mr. Strouss: No questions.

[fol. 789] Mr. Booth: We offer this in evidence as Defendant's Exhibit No. 60.

The Court: The same objections, I take it?

Mr. Strouss: The same objections.

The Court: It may be admitted. Objections overruled.

(Thereupon the document referred to was received in evidence and marked "Defendant's Exhibit No. 60")

Mr. Booth: Mr. Millard, will you take the annual report, Form A, which you used in the preparation of the two exhibits, your exhibits, which have been introduced in evidence, Annual Report for the Year Ending December 31,

1939, and turning to schedule 541, beginning on page 512, Revenue Freight Carried during the year, will you please read from page 519 the grand total of car-load traffic carried during that year by cars and tons?

A. The total is 197,188 cars, and 5,108,026 tons of car-load traffic.

Q. And the tons of less than car-load freight?

A. 96,097 tons of the less than car-load freight, not included in the former total.

Q. Spread out kind of thin, isn't it?

A. Yes.

Q. I guess the trucks have it?

A. Our own trucks.

[fol. 790] Q. You have your own trucks?

A. Yes.

Q. Now, will you read, please, the number of cars and tons by the groups, beginning with group one, products of agriculture?

A. Products of agriculture, 46,054 cars; products of animals, 4,330 cars; products of mines, 20,056 cars; products of forests, 28,762 cars; manufacturers and miscellaneous, 97,986 cars; total, 197,188 cars.

Q. Can you give some percentages illustrative of the quantity of freight originating in your lines and quantity handled by connections and so on?

A. Yes, based on line 850 on pages 518 and 519, cars originating on the line and terminating on the line, 21,814, or 11%; cars originating on the line and delivered to connections, 63,094 cars, or 32%; cars received from connections terminating on the line, 38,606 cars, or 20%; cars received from connections and delivered to other connections beyond, 73,674 cars, or 37%.

Q. So your road acts as a bridge for about 37% of the cars it handles?

A. Yes, it does.

Q. What is the principal commodity, stated by carload lots, that is handled according to those statistics, on the St. [fol. 791] Louis Southwestern in 1939?

A. Considering perishables as a single commodity, that commodity was 17,902 cars, gasoline 22,543 cars, lumber 16,982 cars, cotton 7,451 cars, would be the most important commodities.

Q. Have you, Mr. Millard, prepared a statement from Schedule 541 of your 1939 report showing in detail the perishables movement for that year in carloads on your line?

A. Yes.

Mr. Booth: We ask that this be marked for identification.

(Thereupon the document referred to was marked "Defendant's Exhibit No. 61 for identification.")

Mr. Booth:

Q. This statement is a copy, is it not, of certain numbered lines in Schedule 541 as shown in the schedule?

A. Yes, it is.

Q. It is not a summary, but a copy of those lines, it is not a summary made by you, but it is a copy of those lines?

A. That is true.

Q. It is a correct copy of the lines referred to?

A. Yes, except that the line "Total Perishables" is a computation based upon the lines just above.

[fol. 792] Q. Now, you have lines 110 to 143, inclusive. There are no lines between those in the schedule 541?

A. No.

Q. Why is that; do you know?

A. Yes, the committee on statistics in cooperation with the Interstate Commerce Commission have left blank numbers so that future commodities could be assigned numbers within this group. I know that from being on the committee on statistics.

Q. As a matter of fact, that has been done in past years from time to time, has it not?

A. Yes, there are several instances of that on this page. 110 was formerly combined with 111 as separate fruits, then a separation made as shown, 140 oranges, and grapefruits, 111, lemons, limes and other citrus fruits.

Q. Cabbage has always been 140 and will always be 140 as long as this system is kept up?

A. Yes.

Q. If you wanted to specify red cabbage, you might make it 140A or some number?

A. Yes.

Mr. Booth: Any questions, Mr. Strouss?

Mr. Strouss: No.

Mr. Booth: We offer this in evidence as Defendant's Exhibit [fol. 793] Exhibit 61.

Mr. Strouss: The same objections.

The Court: It may be admitted. Objections overruled.

(Thereupon the document referred to was received in evidence and marked "Defendant's Exhibit No. 61.")

[fol. 794] Mr. Booth: As soon as we can get these photostated we will ask the privilege of substituting one standard form.

The Court: The photostatic copies may be substituted.

Mr. Booth:

Q. This was prepared by you since yesterday afternoon, was it?

A. Yes, sir.

Q. Exhibit No. 61 shows, does it not, that of 17,902 carloads perishables handled only how many originated on your line?

A. 4,579 originated on the line. That is the sum of the figures in the first two columns on the line marked "Total perishables."

Q. How many of those carloads did your company handle as a bridge between one railroad and another?

A. 14,945 carloads out of a total of 17,902 were handled in bridge traffic.

Mr. Booth: You may cross-examine. We wish to tender in connection with the exhibits received in evidence during the examination of Mr. Millard the annual reports and forms OS-A referred to by him and which are here in the courtroom.

[fol. 795] Cross-examination.

By Mr. Strouss:

Q. These accounting records prior to and including 1933 are they records in the same form as the annual reports?

A. Oh, yes, they are the annual reports to the Interstate Commerce Commission and the reason that I cannot say the exhibit is formed directly from a single report is that two reports were filed, one covering the operations in Texas and the other covering the operations outside of Texas but a form A report was filed in all particulars for each one of the two companies.

Q. These reports or records that you have here, is that what they are, your copies?

A. Yes, the office copies.

Q. It follows the items the same as form A?

A. Oh, yes, in every respect.

Q. These operating expenses as shown in column C of exhibit No. 59, that amount represents, does it not, a total of the different items of expense beginning with item 201 on page 304 of form A and extending over to item 462 on page 312. Is that correct?

A. Yes, for the expenses shown in column C on exhibit [fol. 796] No. 59 but not for the expenses shown in column D on exhibit No. 59.

Q. No, I was just asking about column C.

A. That is true with respect to column C. The numbers which you used are the account numbers prescribed by the Interstate Commerce Commission for operating expense accounts.

Q. And shown in form A which is part of exhibit No. 9 in this case?

A. Yes.

Q. Any changes from year to year as reflected in the figures that you have set out here on your exhibit are the over-all changes for those different items for that year as compared with the previous year?

A. The figures were in each case taken from the reports for the year to which they pertain. There are no comparisons with one year and the other in the form. Perhaps I don't understand your question?

Q. This figure is the grand total of all of those items preceding it, that is, 201 to 462?

A. In column C, yes.

Q. And any changes that are reflected in that figure from the previous year, any change in operating expense would be the over-all change for all of those items, it doesn't [fol. 797] reflect any change in any particular item?

A. No, it is as the face of the exhibit shows the total freight operating expenses.

Q. And the same would be true of freight transportation expenses which include items 371 to 462?

A. No, items 371 to 420.

Q. Yes, that is right.

A. That should really be designated as accounts 372 to 420.

Q. That is in form A?

A. Yes.

Q. On exhibit No. 60 your miles of line operated in freight service, there has been a reduction. Is that due to abandonment of unprofitable branch lines?

A. We have added some lines and abandoned others with a net decrease as shown on the first line of exhibit No. 60.

Q. The lines that were abandoned were with the permission of the Interstate Commerce Commission and for the reason that they were unprofitable?

A. Oh, yes, in all cases.

Mr. Strouss: I think that is all the questions I have.

[fol. 798] Redirect examination.

By Mr. Booth:

Q. In view of counsel's questions about the detail of the expense account I want to ask you a few questions about the construction of the annual report, not the legal construction, but the mechanical construction of the annual report to the Commission which is attached to exhibit No. 9. I am handing His Honor a blank so he can follow the testimony. If you will take one of these annual reports of the Commission, Mr. Millard, and go over the railway operating expenses, say for example, schedule 320, Maintenance of Way and Structures.

Mr. Strouss: Page 304.

Mr. Booth:

Q. The items beginning with superintendence on that page and ending with ballast are numbered 201 to 218 inclusive. Is that correct?

A. Yes, sir.

Q. I now show you our exhibit No. 8 in this case and ask you whether you can find in the official classification of the Commission, which is one of the documents certified to in that Commission, these same account numbers.

A. Yes, in the document entitled, "Classification of Operating and Revenues and Operating Expenses of Steam Roads Prescribed by the Interstate Commerce Com-

mission in Accordance with Section 20 of the Act to Regulate Commerce, Issue of 1914," on page 25 at the bottom of the page under a center heading reading: "Primary Accounts," is the title "I. Maintenance of Way and Structures" and then indented under that heading the first line is 201 superintendence and the numbers continue for the rest of page 25 and on to about a third of page 27, prescribing numbered accounts for maintenance of way and structures. The numbers preceding these accounts on the pages I have just quoted are the same as the numbers in parentheses on page 304 of the form A.

Q. So without going into great detail the items, the numbers in the annual reports correspond with the numbers in the classification of accounts of the Interstate Commerce Commission?

A. Yes, in all cases.

Mr. Strouss: I think those exhibits speak for themselves. I think we are wasting quite a bit of time on matters that the court can read from the exhibit as well as having the witness read them to him.

Mr. Booth: There has been a certain amount of haziness [fol. 800] about these railroad records and I want to show how meticulously they are kept and prescribed. The Interstate Commerce Commission prescribes the classification of accounts and says that the railroad cannot keep any other kind of accounts. Is that correct?

A. Yes.

Q. And it has a force of examiners who go around and examine the accounts to see if they are keeping the accounts that way?

A. Yes, it has.

Q. The whole system of accounting and reports tie up together by a common classification on all railroads of a given class, is that correct?

A. That is correct.

Mr. Booth: I also want to call attention to the fact that in this same exhibit there is a document called "Accounting Bulletin No. 15" which gives the interpretation by the Interstate Commerce Commission of its accounting classifications. That is all. May Mr. Millard be excused or do you wish to recall him?

Mr. Strouss: No, I think that is all for this witness.

The Court: Mr. Millard may be excused.

(Witness excused.)

[fol. 801] BERNARD M. SNELL was called as a witness in behalf of the defendant and being first duly sworn testified as follows:

Direct examination.

By Mr. Booth:

Q. Will you state your name and residence to the reporter, please?

A. Bernard M. Snell, Chicago, Illinois.

Q. What is your position with what company?

A. Engineer statistician, Chicago and Northwestern Railway Company, Charles M. Thompson, trustee.

Q. That is another company that is in trusteeship in the Federal court?

A. Yes, sir.

Q. How long have you occupied that position with the company?

A. Since June, 1936.

Q. And prior to that time what position, if any, did you occupy with that company?

A. Prior to that time for about ten years I was cost engineer in the engineering and valuation departments.

Q. Of the same company?

[fol. 802] A. Yes, sir.

Q. And prior to that time what position did you hold?

A. I was in various positions from roadman to assistant engineer from the year 1909 up to about 1921 or 1922, except during the time I was with the construction division of the Army during World War I.

Q. Overseas?

A. No, I was on the Charleston Army supply base, Charleston, South Carolina, as engineer on railroads and I was also on fortification work in the Panama Canal Zone.

Q. Was degree, if any, do you hold and from what institution?

A. I do not hold any degree. I was a special student for a number of years at Northwestern University and

I also had early engineering schooling in a small school in Virginia, M. A. T., it is out of existence now.

Q. I show you an outline map purporting to show the territory traversed by and the lines of the Chicago Northwestern Railway Company and ask you if that represents in a general way at least the railroad lines of that company and the states it serves?

A. Yes, sir, it does.

[fol. 803] Mr. Booth: We ask that this be marked for identification.

The Clerk: Defendant's exhibit No. 62 for identification.

Mr. Booth: It will be offered on the testimony of the operating witness for that company.

Q. In the course of your employment, particularly your present employment, have you become familiar with the accounting requirements and the reports made pursuant thereto as required by the Interstate Commerce Commission of Class I railroads?

A. Yes, sir.

Q. Your company is a Class I railroad, isn't it?

A. Yes, it is.

Q. Have you for the purposes of this case prepared or personally checked from the original sources the statement entitled "Chicago and Northwestern Railway Company, Freight Operating and Freight Transportation Expenses Related to Traffic, Calendar Years 1922 to 1939 Inclusive"?

A. Yes, sir.

Q. You have that in your hand?

A. Yes, sir.

Q. Have you with you in the courtroom and on the table beside you the annual reports of the Chicago and [fol. 804] Northwestern Railway Company to the Interstate Commerce Commission on form A for the years 1922 to 1939 inclusive?

A. Yes, sir, I have them with me here.

Q. What do you mean by the expression "Accounting records" of the company to and including the year 1935 as stated in the footnote?

A. In compiling this exhibit we used certain records in our office which totaled those expenses. However, these reports merely by addition give the same figures. It was really unnecessary to make that statement.

Q. Could you truthfully make the statement that all of the figures contained in columns B, C, and D in this report opposite the years 1922 to 1939 can be obtained from the annual reports of the company to the Commission irrespective of any records which are in your office and which have not been produced here?

A. That is correct, merely by addition during those years the figures can be verified or supported.

Q. The accounts of the company were kept during those years in accordance with the accounting regulations of the Commission?

A. Yes, sir.

Q. And the reports were prepared in accordance with the [fol. 805] instructions in preparing reports and on the forms furnished by the Commission?

A. Yes, sir.

Mr. Booth: Pardon me for using the word "truthfully." I thought I was talking to a lay witness in a crossing accident case or something of that kind. We ask that this be identified as exhibit No. 63.

The Clerk: Defendant's exhibit No. 63 for identification.

Mr. Booth:

Q. The columns E and F under the three blocks; horizontal blocks at the bottom of the exhibit are respectively computations or additions made by you, are they not?

A. Yes, sir.

Q. Are those true and correct?

A. They are to the best of my knowledge.

Q. You have checked them?

A. Yes, sir.

Mr. Booth: Any questions, Mr. Strouss?

Mr. Strouss: No questions.

Mr. Booth: We offer this in evidence as defendant's exhibit No. 63.

Mr. Strouss: The same objection.

The Court: It may be admitted.

The document referred to was received in evidence and [fol. 806] marked defendant's exhibit No. 63.

The Court: Gentlemen, we will take a brief recess at this time.

[fol. 807] At the conclusion of the recess, the witness Bernard M. Snell was recalled to the stand, and proceedings were resumed as follows:

The Court: You may proceed.

Mr. Strouss: I have excused Mr. Millard, so far as I am concerned.

Mr. Boyle: And with his records?

Mr. Strouss: Yes.

Mr. Booth:

Q. Have you prepared an exhibit entitled, "Chicago Northwestern Railway, Freight Service Operating Averages, Calendar years 1922, 1924, 1926, 1928, 1930, 1932, 1934, 1936, 1938 and 1939?"

A. Yes, sir.

Q. Have you the exhibit before you?

A. Yes, I have.

Mr. Booth: We ask that this exhibit be marked.

(Thereupon the document referred to was marked, "Defendant's Exhibit No. 64 for identification.")

Mr. Booth:

Q. On this exhibit are there shown on the footnotes consisting of five short paragraphs, the sources from which the exhibit was taken?

A. Yes, sir.

Q. You are familiar with the forms OS-A filed by the Northwestern with the Interstate Commerce Commission?

[fol. 808] A. I am.

Q. And does the Northwestern maintain its file copies of those forms as filed with the Interstate Commerce Commission?

A. Yes, sir.

Q. And have you those forms OS-A insofar as they relate to the exhibit 64 or were used in its preparation?

A. I have them here with me now.

Q. Were the figures used in this Exhibit 64, which are either set forth identically in the exhibit or form the bases of computations shown in the exhibit, taken from any other source than forms OS-A and the annual reports?

A. The basic figures are from the OS-A and annual reports.

Q. And no other source?

A. And no other source?

Q. Those supplies for the basic figures you have with you in the court room?

A. Yes.

Q. Do the items in the source-note correctly describe the sources and the formula for the respective items in the exhibit?

A. Yes, sir.

Q. On lines in the exhibit. And have the computations in [fol. 809] lines 3, 4, 7 and 8 been correctly made?

A. Yes, sir.

Q. By the way, how do you arrive at the items in line 10, is that an absolute figure or the result of a computation?

A. That is the result of the computation in our offices in Chicago.

Q. Computation from figures contained in the annual report?

A. Yes, sir.

Q. Can you give the formula for that computation?

A. That is covered by item 8 at the bottom in the source statement.

Q. Oh, that is covered by item 8. Mr. Mason supervised the preparation of these exhibits. I would like to have him straighten this out.

Mr. Mason:

Q. Isn't there a slight misstatement in the footnote at the bottom of the sheet? Item 9 is the division of net ton-miles by train-hours instead of item 7?

A. Yes, that is correct.

Q. And the figure at the footnote, item 7 should be changed to item 9 for the sake of correctness?

A. Yes, it should.

Mr. Mason: May we have that change made on the copy? [fol. 810] The Court: Yes, the change may be made. That is, under the source items. Item 7 should be changed to item No. 9.

The Witness: Are we not confusing items and line numbers?

Mr. Mason: Item and line numbers are the same in the body of the exhibit. Refer to item 10, Gross Ton-Miles per Ton of Value.

The Court: When you say Item 10 you mean Line 10?

Mr. Mason: Yes.

Q. Isn't that actually the result, rather, shouldn't the reference under the heading, "Source to Item 8" properly be "to Item 10?"

A. It should be to Line 10.

Q. Line 10?

A. Yes.

Q. So that the figure 8 in the source should be changed to 10, so it should read, "Item 10, Gross Ton-Miles" etc.. The last statement on the exhibit?

A. Yes.

Mr. Mason: May we have that change likewise made?

The Court: The change may be made by the Clerk.

Mr. Mason: That leaves us without any references to items 7 and 8. I will ask you if those weren't taken directly [fol. 811] from the forms OS-A, Freight Train Speed, and Line 8, Gross Ton-Miles per Freight Train Hour?

A. Yes sir, that is correct.

Q. Then isn't it correct that we should insert reference to Lines 7 and 8 in the first note under the heading, "Source" at the foot of the exhibit?

A. Yes.

Mr. Mason: May we have that reference added in the record copies of the exhibit so it will read, "Items 1, 2, 5, 6, 7 and 8, Reports of Freight Train Performance?"

The Court: Yes, that may be added.

Mr. Mason:

Q. Mr. Snell, my attention has been called to two other changes that should be made in those footnote references. As I read the exhibit, lines 3 and 4 are items which are taken from the form OS-A reports?

A. That is correct.

Q. And lines 5 and 6 are the results of divisions as expressed in the second and third footnotes at the foot of the exhibit?

A. Yes, that is right.

Q. In other words, the first line opposite the word "source" should correctly — "Items 1, 2, 3, 4, 7 and 8," in-

dicating that those are directly taken from forms OS-A: [fol. 812] am I correct?

A. I would like a moment to check this now.

The Court: May I suggest that you correct this original exhibit to speak the truth here, then we will admit it in that manner?

Mr. Mason: We will do that. We will return to this exhibit later.

The Court: I take it, Mr. Mason, that there are no changes in the basic data contained in lines 1 to 10, it is merely the source from which this data was obtained that you are seeking to correct.

Mr. Mason: The change is not even as extensive as that. There are no changes in the text or face of the exhibit so far as the information which it shows is concerned, it is merely a slight mistake in the references at the foot of the sheet. The underlying documents are as shown, but there was a failure to connect the footnotes with the correct items in the body of the exhibit.

The Court: I suggest you examine the witness on the exhibit. The court, during the noon recess, will permit you to make such changes as are necessary in your source notations.

Mr. Booth:

Q. Are the figures shown in the exhibit, other than computations, correctly abstracted from the sources shown? [fol. 813] A. Yes, sir.

Q. And are the computations correctly made from the source shown?

Mr. Booth: We offer the exhibit in evidence as Defendant's Exhibit 64.

Mr. Strouss: The same objection.

The Court: It may be admitted. Objection overruled.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 64").

Mr. Booth:

Q. Have you the forms OS-A with you?

A. Yes, sir, I have them here now.

Mr. Booth: We tender for the examination of counsel the annual reports and forms OS-A so far as those forms

were used, or such of the forms as were used in making this exhibit.

Q. Will you take your annual report of the Chicago Northwestern Railway Co. for the calendar year 1939 and turn to Schedule 541 and read from page 119 the grand total of carloads traffic?

A. Carloads.

Q. Carloads and tons.

A. 1,195,259 carloads; 35,100,136 tons.

Q. And the tons of less than carload freight?

[fol. 814] A. 810,525.

Q. Will you read by groups, stating the groups, the number of carloads of each group in schedule 541?

A. Products of agriculture, 178,632 carloads; animals and products, 121,032 carloads; products of mines, 286,056; products of forests, 104,415 carloads; manufacturers and miscellaneous, 415,124 carloads.

Q. Have you prepared from this annual report for 1939 an exhibit in typewriting consisting of one sheet and showing by carloads items 110 to 143, inclusive, and certain other totals of the agricultural group?

A. I have.

Q. Is this it and is it correct?

A. Yes, sir, this is it and it is correct.

Q. That doesn't involve any computation, does it, other than the totals in the line headed, "Totals, 110 to 143, inclusive," that you computed yourself?

A. Yes, the total for perishables I added; the other figures are from the annual report.

Q. Will you take items 110 to 128, inclusive, beginning with oranges and grapefruits and ending with Fruits, Fresh and Tropical, and say how many carloads of that revenue freight originated on the Northwestern Railroad. [fol. 815] A. 3,683 cars originated on our road.

Q. I don't think I made myself clear. I am talking about lines 110 to 128, inclusive. That is, oranges, grapefruits, lemons, apples and so on.

A. But exclusive of potatoes, cabbage, onions?

Q. Yes.

A. Oh, I beg your pardon. Items 110 to 128, inclusive, a total of 83 cars originated on the Chicago Northwestern Railway during the year 1939.

Q. And as to the other cars in those items, the 'railroad' was merely a bridge between connecting lines at either end, is that correct, or delivered at Chicago?

A. Yes, as to the other cars, we either hand them to other carriers or terminate.

Mr. Booth: You may cross-examine.

Cross-examination.

By Mr. Strouss:

Q. Mr. Snell, the figures which are shown on your exhibit 63 in column C—

Mr. Booth: I don't think I offered this Exhibit in evidence, did I.

The Court: That is true, you didn't.

Mr. Booth: I offer this commodity statement about [fol. 816] which I was questioning the witness immediately prior to concluding the direct examination, I offer this in evidence as Defendant's Exhibit 65.

Mr. Strouss: The same objection.

The Court: The same ruling. It may be admitted.

(Thereupon the document referred to was received in evidence and marked, "Defendant's Exhibit 65.")

Mr. Booth: We will desire to substitute a photostatic copy.

Mr. Strouss: The items shown in column C of Defendant's Exhibit 63, those are the totals of the different items of operating expense shown in form A, the annual report, representing accounts 201 to 462?

A. Did you say 462?

Q. Account 462 on page 412, the totals shown just below that?

A. Yes, that is correct.

[fol. 817] Mr. Strouss: The items in column D represent the accounts beginning with account 371 on page 308 of the annual report and continuing over to account 420?

A. Yes, sir.

Mr. Strouss: That is all.

Mr. Booth: No further questions.

The Court: May this witness be excused now, gentlemen?

Mr. Strouss: Yes.

The Court: And the records which he has produced here in court released?

Mr. Strouss: Yes.

The Court: It is so ordered.

(Witness excused.)

E. M. ALBERT was called as a witness in behalf of the defendant and being first duly sworn testified as follows:

Direct examination.

By Mr. Booth:

Q. Will you state your name and residence to the reporter, please?

A. E. M. Albert, Philadelphia, Pennsylvania.

Q. What is your official position with the Pennsylvania [fol. 818] Railroad Company?

A. Chief statistician, office of vice-president and comptroller.

Q. How long have you been employed by the Pennsylvania Railroad Company?

A. Thirty-eight years.

Q. All of that time in the accounting department?

A. Yes, sir.

Q. How long have you occupied your present position?

A. Since May 1, 1931.

Q. Are you familiar with the requirements and accounting practices of Class I railroads required by the Interstate Commerce Commission?

A. Yes, sir.

Q. Are those practices followed by your railroad?

A. Yes, sir.

Q. Does your railroad render a report on forms OS-A and OS-E and the annual report on form A to the Commission?

A. Yes, sir, it does.

Q. Has it done so at least since the year 1922?

A. Yes.

Mr. Booth: We ask to have marked for identification a [fol. 819] map of the Pennsylvania Railroad.

The Clerk: Defendant's exhibit No. 66 for identification.

Mr. Booth: We will further identify and offer it during the examination of another witness.

Q. Mr. Albert, does this show in a general way the territory served by the Pennsylvania?

A. Yes.

Q. Did you bring with you and have you here in the courtroom the filed copies of the annual reports of the Pennsylvania Railroad to the Interstate Commerce Commission for the calendar years 1922 to 1939 inclusive?

A. Yes.

Q. They are on the table beside you?

A. They are.

Q. What form OS-A report did you bring with you?

A. I brought form OS-A reports for the years 1922 to 1939 inclusive.

Mr. Booth: I have handed the clerk a proposed exhibit which I ask to have marked defendant's exhibit No. 67 for identification.

The Court: It may be marked.

The Clerk: Defendant's exhibit No. 67 for identification.

Mr. Booth:

Q. Defendant's exhibit No. 67 for identification is on [fol. 820] titled, "The Pennsylvania Railroad, Freight Operating and Freight Transportation Expenses Related to Traffic, Calendar Years 1922 to 1939 Inclusive." From what sources were the figures in this exhibit other than the computations taken?

A. From the annual report form A of the Pennsylvania to the Interstate Commerce Commission.

Q. And solely from that source?

A. Yes, sir.

Q. Those reports are those that you have with you and are on the table beside you?

A. Yes, sir.

Q. Are the figures in columns B, C, and D opposite the years 1922 to 1939 inclusive shown as such figures in the reports?

A. Yes.

Q. They are not the result of computation?

A. They are not.

Q. Are those correctly transcribed from those reports?

A. They are.

Q. The figures in columns E and F and in the three horizontal blocks at the bottom of the exhibit are computations, are they not?

A. They are.

Q. Are they true and correct to the best of your knowledge [fol. 821] edge?

A. Yes, sir, I checked those.

Q. Is the exhibit as a whole true and correct to the best of your knowledge and belief?

A. It is.

Mr. Booth: Any questions?

Mr. Strouss: I have no questions.

Mr. Booth: I offer this in evidence as defendant's exhibit No. 67.

Mr. Strouss: The same objection.

The Court: It may be admitted, the objection is overruled.

The document referred to was received in evidence and marked defendant's exhibit No. 67.

Mr. Booth: The clerk has been handed a sheet of one page which I ask to have marked as defendant's exhibit No. 68 for identification.

The Clerk: Defendant's exhibit No. 68 for identification.

Mr. Booth:

Q. This exhibit is headed, "The Pennsylvania Railroad, Freight Service Operating Averages, Calendar Years 1922, 1924, 1926, 1928, 1930, 1932, 1934, 1936, 1938 and 1939." Did you prepare this exhibit?

A. It was prepared under my supervision, yes, sir.

[fol. 822] Q. Have you checked it to determine its correctness?

A. Yes, sir, I have.

Q. Are the figures shown in this exhibit or used as the bases for the computations made as shown on the face of the exhibit taken in part from the annual reports of the railroad to the Interstate Commerce Commission for the years mentioned in the exhibit?

A. Yes, sir.

Q. And in part from what other sources are those figures taken?

A. Form OS-A and also form OS-E.

Q. Are the figures used in preparing this exhibit, either those appearing as such on its face or used in the computations, taken from any other source than the annual report and the forms OS-A and OS-E of the railroad company?

A. No.

Q. Do the paragraphs in the footnote entitled "Source" at the foot of the exhibit correctly state the source of the figures shown on the exhibit and where computations have been made the method of computation and the basic data for the computation?

A. Yes, sir.

[fol. 823] Q. You have checked this exhibit to determine its correctness?

A. I have.

Q. Is it true and correct to the best of your knowledge and belief?

A. It is.

Q. The years shown in this exhibit were not selected by you or so far as you know by any Pennsylvania Railroad official?

A. They were not.

Q. The years were requested by the Southern Pacific Company?

A. Yes, sir.

Mr. Booth: Any questions, Mr. Strouss?

Mr. Strouss: Yes, I have one question. I notice on the bottom of the exhibit a star referring to item in line 2, "Excludes light train miles." Would that include helper engines running light on their return trip?

A. No, that is my understanding.

Q. Are you sure of that?

A. I am not positive, but the reason we made that note was prior to 1936 the OS-A made no separation of the freight train miles as between ordinary and light and beginning in 1936 we eliminated the light train miles.

[fol. 824] Q. A helper engine returning is classified as "light," isn't it?

A. That is right, that is my understanding.

Mr. Booth: I will bring that out in the examination of another witness regarding the operating practices of the

Pennsylvania which may clear this up. We offer this in evidence as defendant's exhibit No. 68 together with a tender of the reports and forms OS-A and OS-E referred to by the witness.

Mr. Strouss: The same objection.

The Court: The same ruling, it may be admitted in evidence.

(The document referred to was received in evidence and marked defendant's exhibit No. 68.)

Mr. Booth:

Q. Mr. Albert, will you turn to your annual report for the calendar year 1939 on form A, schedule 541, on page 519 and will you give us for the record the grand total of carload traffic for that year in cars and tons?

A. 3,848,237 cars; 145,643,815 tons.

Q. And the less than carload in tons?

A. 3,151,062.

Q. Will you turn back, beginning with page 512 and call off the number of carloads handled in each group, naming the group?

A. Products of agriculture, 411,293 cars; animals and [fol. 825] products, 127,978; products of mines, 1,636,881; products of forests, 134,486; manufactures and miscellaneous, 1,537,599.

Q. What is the predominating carload figure in the item "products of mines"?

A. Bituminous coal.

Q. That is how many carloads?

A. 1,012,250.

Q. What comes next in the number of carloads in the products of mines?

A. Anthracite coal.

Q. That is how many carloads?

A. 185,523.

Q. Have you prepared from that report a statement showing among other things items 110 to 143 inclusive of the products of agriculture? I hand a copy of a typewritten exhibit consisting of one sheet to the clerk and ask it be marked defendant's exhibit No. 69 for identification.

The Court: It may be marked.

The Clerk: Defendant's exhibit No. 69 for identification.

Mr. Booth:

Q. Referring to defendant's exhibit No. 69 for identification, does this exhibit correctly show items 110 to 143 inclusive of the annual reports from which you have been testifying?

[fol. 826] A. It does.

Q. That is in the commodities statement under Class I?

A. Yes, sir.

Q. Does it also show in line 800 the total products of agriculture handled by carloads?

A. Yes.

Q. And the grand total of all carload traffic in item 850?

A. Yes, sir.

Q. The only computation on this exhibit is the line headed, "Total 110 to 143 inclusive"?

A. That is correct.

Q. And that is made by you and is correct?

A. Yes, sir.

Mr. Booth: Any questions on this, Mr. Strouss?

Mr. Strouss: No questions.

Mr. Booth: We offer this in evidence as exhibit No. 69.

Mr. Strouss: The same objections.

The Court: It may be admitted. Objection overruled.

(The document referred to was received in evidence and marked defendant's exhibit No. 69.)

Mr. Booth: That is all, thank you, Mr. Albert.

[fol. 827] Cross-examination.

By Mr. Strouss:

Q. Mr. Albert, the figures shown in column C of exhibit No. 67, "Freight Operating and Freight Transportation Expenses Related to Traffic," represent the total of accounts 201 to 462 of Form A, the annual report to the Interstate Commerce Commission, page 304 to 312, accounts 201 to 462, is that correct?

A. That is correct.

Q. And the item in column D represents accounts 371 to 420, the total of those two?

A. Yes, that is correct.

Q. On your exhibit No. 68, line 1, "Miles of line operated in freight service," I notice quite a reduction in miles of line operated. Was that due to abandonment of branch lines that were unprofitable?

A. That is right.

Mr. Strouss: That is all.

Mr. Booth: May Mr. Albert be excused and take his books with him?

Mr. Strouss: He may.

The Court: He may be excused. We will take our noon recess at this time. The court will be at recess until 2 o'clock.

[fol. 828]

Wednesday, December 4, 1940, 2:00 P. M.

All parties being represented as heretofore noted, proceedings were resumed as follows:

Mr. Booth: I will call Mr. Gregory for cross-examination. Before we enter on the cross-examination, I have arranged with counsel for plaintiff to put in some commodities by the accounting witnesses who have not yet put them in, similar to the commodity statements put in this morning.

C. G. GREGORY was recalled to the stand and testified further as follows:

Direct examination.

(Continued) by Mr. Booth:

Q. Mr. Gregory, you have heard the testimony of Mr. Albert of the Pennsylvania Railroad Co.

A. I wasn't in court this morning.

Q. Well, I will take this another way. Did you prepare this morning or last night from the annual report of the Northern Pacific Railway Co. to the Interstate Commerce Commission for the calendar year 1939, the statement showing from Schedule 541 of that report the agricultural products by cars, shown in items 110 to 143, inclusive, of the report?

[fol. 829] A. Yes, sir.

Mr. Booth: We ask to have this marked for identification.

The Court: It may be marked.

The Clerk: Defendant's Exhibit 70 for identification.

Mr. Booth: And aside from the totals opposite the word "total" are all of the figures on this statement, Exhibit 70 for identification, correctly transcribed and taken bodily from that report?

A. They are.

Mr. Booth: We offer the exhibit in evidence if counsel has no questions.

Mr. Strouss: No questions.

The Court: The same objections?

Mr. Strouss: The same objections.

The Court: The same ruling.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 70.")

Mr. Booth: That is all.

Mr. Mason: Your honor, before the cross-examination, in connection with Exhibit 64, this morning there were certain changes in the references in the footnote entitled "source" which we made by reference, but after further consideration of your honor's remarks, we have retyped [fol. 830] and now present retyped copies of the exhibit, which we would like to substitute for those previously distributed.

The Court: If there is no objection, that may be done.

Mr. Strouss: I have no objection.

Mr. Mason: There is no change in the basic material, just a change in the reference. I will ask that the other copies be destroyed, whether in the possession of the clerk or opposing counsel.

The Court: Just destroy those. You may proceed.

Cross-examination.

By Mr. Strouss:

Q. Mr. Gregory, will you refer to Defendant's Exhibit No. 48, Northern Pacific Railway Co., Freight Operating and Freight Transportation Expenses related to traffic,

column C of that exhibit, the figures set out in that column are the total of items or accounts 201 to 462?

A. Yes, sir.

Q. Of the annual report for May?

A. That is true, and they also include an allowance for transportation investment, which is a credit that comes in below account 462.

Q. And the items or amounts shown in column D are the total of accounts 371 to 420?

[fol. 831] A. Yes, sir.

Mr. Strouss: That is all.

Mr. Booth: No further questions. May Mr. Gregory now be excused and take his reports with him?

Mr. Strouss: No objection.

The Court: Mr. Gregory may be permanently excused.

H. H. SIDDALL was recalled to the stand and testified further as follows:

Direct examination (continued) as follows:

Mr. Booth: A document of one sheet is being handed to the Clerk and we ask that it be marked Defendant's Exhibit 71 for identification.

The Clerk: Defendant's Exhibit No. 71 for identification.

Mr. Booth: Mr. Siddall, referring to Exhibit 71 for identification, did you prepare this personally?

A. Yes, I did.

Q. Was it prepared from the annual report of the Chicago, Rock Island, Pacific Railway Co. to the Interstate [fol. 832] Commerce Commission for the calendar year 1937?

A. Yes, sir.

Q. The same report to which you have referred in your direct testimony previously?

A. That is correct.

Q. Was this exhibit, with the exception of the line of totals, the fifth line from the bottom of the exhibit, entirely taken verbatim without alteration from the Schedule 541 of that report?

A. That is right, yes sir.

Q. And is it true and correct?

A. True and correct.

Q. You prepared it personally?

A. I prepared it personally.

Q. The totals are correct?

A. The totals are correct.

Mr. Booth: Any questions?

Mr. Strauss: No questions.

Mr. Booth: I offer this in evidence as Defendant's Exhibit 71.

Mr. Strauss: The same objections.

The Court: Overruled. It may be admitted in evidence.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 71.")

Mr. Booth: That is all.

[fol. 833] Cross-examination.

By Mr. Strauss:

Q. Mr. Siddall, referring to Defendant's Exhibit 51, Rock Island Lines, Freight Operating and Freight Transportation Expenses related to traffic, the amounts set out in column C represent, do they not, the total of accounts 201 to 462 of the annual report for May?

A. Well, it goes a little further than that, it goes to the line, Grand Total Operating Expenses, which includes transportation for investment credit. That is on page 313 and it refers to the total freight expense only in column E.

Q. Is that line 247?

A. Yes. That refers to column C on the exhibit.

Q. Column D?

A. Column E here on the ICC report.

Q. I mean your column D on your exhibit is Accounts 371 to 420, I guess?

A. Yes, column D in the exhibit.

Q. Now, referring to your exhibit 52, the reduction in mileage as shown in line one, I don't remember whether I asked you about that before, but does that represent mileage abandoned as unprofitable?

[fol. 834] A. Yes. I believe you did ask me that, I remember answering it.

Mr. Strouss: It seems to me I did, too. That is all.

Mr. Booth: No further questions. May Mr. Siddall be excused?

Mr. Strouss: No objections.

The Court: He may be excused.

[fol. 835] W. M. BURN was recalled as a witness on behalf of the defendant and having been previously sworn testified further as follows:

Direct examination (Continued):

Mr. Booth: The clerk has been handed a document which we ask to be marked as defendant's exhibit No. 72 for identification.

The Clerk: Defendant's exhibit No. 72 for identification.

Mr. Booth:

Q. Mr. Burn, have you prepared from the 1939 annual report to the Interstate Commerce Commission of the Great Northern Railway Company an exhibit which has been handed to the clerk here and marked exhibit No. 72 for identification and which shows from schedule 541 of that report items 110 to 143 inclusive of the carload movement of agricultural products?

A. I have.

Q. And which also shows item 800, total products of agriculture by carloads and classified in four accounts as shown on the exhibit and item 850, the grand total of carload traffic which is already in evidence.

[fol. 836] A. I have.

Q. Aside from the line headed "Total of fresh fruits" and so forth, which is a line of additions, are these figures in this exhibit taken without change or alteration from that report?

A. They are.

Q. Are they correctly set forth on the exhibit?

A. They are.

Mr. Booth: Any questions?

Mr. Strouss: No questions.

Mr. Booth: We offer this in evidence as defendant's exhibit No. 72.

Mr. Strouss: The same objections.

The Court: Objection overruled, it may be admitted in evidence.

(The document referred to was received in evidence and marked defendant's exhibit No. 72.)

Mr. Booth: You may cross-examine.

Cross-examination.

By Mr. Strouss:

Q. Mr. Burn, referring to exhibit No. 46 of the Great Northern Railway Company, "Freight Operating and Freight Transportation Expenses," the amounts set forth in column C of that exhibit represent the total of accounts [fol. 837] 201 to where in the annual report form A?

A. It represents the accounts from 201 to 462 inclusive and from the amounts shown is deducted the item of transportation for investment credit which is shown on page 313 of our annual report to the Interstate Commerce Commission, column E, and one thing further, the figures shown on my exhibit exclude the cost of truck operation which is shown on page 322 of our annual report to the Interstate Commerce Commission for the year 1939.

Q. Column D of your exhibit, that represents the total of accounts 371 to 420 of the annual report?

A. From account 371 to 413 inclusive, exclusive of course of cost of truck line operations.

Q. Defendant's exhibit No. 47, you show a reduction in mileage. Was that due to abandonment of branch lines which were unprofitable?

A. Yes, sir, I gave that answer yesterday.

Mr. Strouss: That is all.

Redirect examination.

By Mr. Booth:

Q. The figures of freight operating expenses represent the freight proportion of operating expenses, do they not? [fol. 838] A. That is right, freight proportion only as the exhibit states.

Q. In other words, for example, superintendence, is that assigned on some basis to freight and passenger?

A. Yes, superintendence, transportation, a very small proportion of that is assigned direct. The balance of the charge is apportioned on a basis prescribed by the Interstate Commerce Commission.

Mr. Strouss: It would be column E of the annual report.

A. Column E of the annual report is the freight proportion.

Mr. Booth:

Q. And the account numbers about which Mr. Strouss has questioned you, are they the same account numbers that are assigned to accounts by the classification of accounts of the Interstate Commerce Commission which has been referred to here in the examination of Mr. Siddall.

A. They are.

Q. In other words, the Commission gives the number of the account and uses the same numbers in both the classification and the annual report, is that right?

A. Yes, sir.

Mr. Mason: I think you stated in answer to a question [fol. 839] from Mr. Strouss that the total of transportation accounts as shown is shown in accounts 371 to 413?

A. Yes, sir.

Q. Have you in mind the accounts 414 to 420 inclusive on page 310 of your annual report which are actually placed ahead of account 413?

A. Yes, sir, accounts 371 to 420 inclusive include the charges before allowance for so-called "joint facility accounts" which are 390, 391, 412, and 413. Charges to those accounts are also included in the transportation rail line expenses.

Q. They are physically placed ahead of account 413 although numerically after it?

A. That is right.

Mr. Mason: I didn't want any mistake to be made.

Mr. Strouss: I was a little confused myself, I didn't quite understand what was meant.

Mr. Mason: I think it should be understood and I think you will agree with me that in each case where the figures are shown opposite certain accounts it is understood only the freight proportion as kept in accordance with the ap-

portionment prescribed by the Interstate Commerce Commission is included.

[Vol. 840] Mr. Strouss: Yes, my questions didn't intend to be taken as meaning that he was taking the figures of both passenger and freight.

The Court: Any further examination of this witness?

Mr. Strouss: No.

The Court: If there is no objection he may be excused and take his records with him.

(Witness excused.)

C. L. LaFountaine was recalled as a witness for further examination as follows:

Cross-examination.

Mr. Strouss:

Q. Mr. LaFountaine, I neglected to ask you the other day how far is it from Minneapolis to Seattle.

A. The freight line is 1,777 miles.

Q. In looking over your timetables there appears to have been some changes in the designation of trains on one or two divisions, probably by time-tables issued after your exhibit was made. Could you take your timetable and trace trains 401 and 402 from Seattle to Minneapolis and Minneapolis to Seattle. Let me ask you first, elapsed time [Vol. 841] on a division means the time between division terminals, does it not?

A. The dead time at the terminal between arriving time of the train and the departing time of the train, it means the dead time assigned to that division point for making up the train, switching and servicing it.

Q. The elapsed time between division points does not include time at the terminal?

A. No, I understand your question correctly now. From the time they are due to depart from one terminal to the arriving time at the next terminal is the actual time on the road.

Q. Where time on the road is shown between points, would that include the time at terminals?

A. No, it would not.

Q. Will you take your timetables and read into the record trains 401 and 402 between Seattle and Minneapolis, giv-

ing the elapsed time as shown at the bottom of the timetable for each division?

A. Neither 402 nor 401 schedule is maintained by that number on our timetables from Seattle to St. Paul or from St. Paul to Seattle. Over certain divisions this 402 symbol train will be run on a different numbered schedule, so it would not be possible for me to show you just which schedule [fol. 842] they might assume. The dispatcher in giving them the orders will run them as 428 quite likely out of Hillyard. I could explain the reason to you for making that kind of timetable on the Kalispell Division if you wish.

Q. You don't have the same schedule every day for that train?

A. You mean by schedule, the same time between Seattle and St. Paul and the same terminal time or do you mean do we have the same schedule number in the timetable?

Q. Do they run at the same leaving time?

A. Yes, we do, regularly. They have a regular time and they are allotted a certain amount of terminal time at each division point.

Q. But that is not shown on your timetable?

A. No, it is not. I couldn't give you that information from the timetable.

Q. It is as to some division?

A. Yes, I could give you this on the Spokane Division.

Q. Is that the only division where this is shown?

A. No, the Minot Division also shows it. 402 is due to leave Interbay, Washington, at 12:01 A. M. and due to [fol. 843] arrive at Wenatchee at 9:20 A. M. same date.

Mr. Booth: That Interbay is Seattle, is it not?

A. Yes, that is the freight terminal four miles east of King Street Station, Seattle.

Mr. Strouss: I wanted to get it in the complete way.

A. We don't have the same numbered schedules on certain divisions.

The Court: I am wondering if this witness were given time if he might furnish you that information from the schedules even though he cannot read it from them.

Mr. Strouss: I understand you Mr. LaFountaine to say that they don't operate that way.

A. Oh, yes, we do. The general superintendent of transportation will prepare a schedule for them to maintain,

allotting them certain running time between each division point and a certain dead time as we call it for preparing the train at the terminal and whether they run the train on 402 schedule as shown in the timetable or as an extra is immaterial to the management.

Mr. Strouss:

Q. But you have a certain fixed time between different terminals?

A. Yes, sir.

Q. Could you prepare that?

[fol. 844] A. I could.

Q. You could probably prepare that before you leave?

A. Yes.

The Court: That train does maintain its identity even though it does not carry the same number?

A. Yes, Your Honor. You will notice even though the train may be run out as 428 it will show the symbol 402, on the 18th or 19th or whatever date it was due to leave its initial station, Seattle in this case and 401 Minneapolis. It is followed on the train sheet all along so the dispatcher and superintendent knows he is handling 402 symbol train through.

Mr. Strouss: If you will do that after you leave the stand, that will be all right.

The Court: It might save a little time for you to make those computations and you will be called back to furnish that information.

Mr. Mason: May the record show the witness has handed to Mr. Strouss a document bearing a designation "Schedule Train 401 and Connections, Effective October 24, 1940" and showing a departure from Minneapolis and times at intermediate points and arrival at Interbay on the fourth date [fol. 845] from the departure from Minneapolis. Is that correct, Mr. Strouss?

Mr. Strouss: Yes.

Mr. Booth: That is what you want, isn't it?

Mr. Strouss: Yes, I offer this in evidence.

Mr. Booth: We have no objection to having it copied into the record.

The Court: You are offering it in evidence as state's exhibit?

Mr. Strouss: If there is no objection, we will have it copied into the record.

Mr. Mason: We have no objection to having it copied into the record at this point. Do you want the connections shown as well?

Mr. Strouss: I don't care about the connections.

The Court: Mr. Reporter, you may copy this particular sheet into the record.

[fol. 846]

Schedule Train 401 and Connections

(Effective October 24, 1940)

	Terminals	Schedule	Date	Running Time	Average M. P. H.	Terminal Time
Lv	Minneapolis	7:00 AM	1st			
Ar	91 62			3'45"	24.43	
Ar	Willmar	10:45 AM	1st			30"
Lv	Willmar	11:15 AM		4'45"	23.72	
Ar	112 67					50"
Ar	Breckenridge	4:00 PM	1st			
Lv	Breckenridge	4:30 PM		7'00"	23.92	
Ar	167 46					15"
Ar	New Rockford	11:30 PM	1st			
Lv	New Rockford	11:45 PM		4'15"	25.60	
Ar	108 81					30"
Ar	Minot	4:00 AM	2nd			
Lv	Minot	4:30 AM		5'00"	24.06	
Ar	129 32					30"
Ar	Williston C.T.	9:30 AM	2nd			
Lv	Williston M.T.	9:00 AM		13'00"	23.80	
Ar	309 38					3'30"
Ar	Havre	10:00 PM	2nd			
Lv	Havre	1:30 AM	3rd			
Ar	104 67			4'45"	22.02	
Lv	Shelby	6:15 AM	3rd			
Ar	50 52			2'15"	22.41	
Ar	Blackfoot	8:30 AM	3rd			15"
Lv	Blackfoot	8:45 AM		6'00"	16.84	
Ar	101 06					
Ar	Whitefish	2:45 PM	3rd			1'00"
Lv	Whitefish	3:45 PM		6'00"	22.42	
Ar	134 55					15"
Ar	Troy M.T.	9:45 PM	3rd			
Lv	Troy P.T.	9:00 PM		6'00"	22.44	
Ar	134 67					1'00"
Ar	Hillyard	3:00 AM	4th			
Lv	Hillyard	4:00 AM		8'00"	22.11	
Ar	177 08					1'00"
Ar	Appleyard	12:01 PM	4th			
Lv	Appleyard	1:00 PM		10'00"	15.32	
Ar	133 16					
Ar	Interbay	11:00 PM	4th			

For 5th AM delivery at Seattle from Twin Cities

[fol. 848] Mr. Strouss: Now in looking over your train sheets I notice that the west-bound train 401 during the days covered, that the number of cars in the train at no time exceeded seventy-five and were between sixty-two and seventy-five, while it appeared on the other divisions that they were somewhat larger. What is the reason for that that you reduced at that point?

A. At what point?

Q. This was on the third division of the Kalispell division?

A. There would be no reason for reducing over that subdivision if we had the tonnage available for the train.

Q. Our checking of your train sheets show that on these days train 401 on the fifteenth, seventy-four cars, on the 16th, 70 cars, on the 17th, seventy-three cars, on the 18th, 73 cars, on the 19th, seventy-three cars, on the 20th, seventy-one cars, on the 21st, seventy-two cars, on the 22nd, sixty-two cars, on the 23rd, seventy-three cars, and on the 24th, seventy-two cars?

A. What was the question?

Q. I wondered if there would be any reason for reducing going over that subdivision?

A. I think I stated in my direct testimony that we had [fol. 849] been holding that train to about seventy-five cars, 3000 tons, in order to maintain our 90-hour schedule.

Q. Our check of your train sheets for that period also showed that during these days over each of three subdivisions there were three passenger trains a day and in no instances did those trains exceed fourteen cars, and in only two instances there were fourteen car trains, and in one instance thirteen car trains.

Q. What passenger trains were they? Can you tell me, please?

Q. I don't have the symbol numbers on these work sheets.

A. Well, I know of my own knowledge we only have two scheduled trains, that is No. 1 and No. 27 westward, and No. 2 and No. 20 eastward; No. 27 and 28 are mail trains, they seldom have fourteen cars so if you have two trains in addition to No. 27 and 28, it would necessarily mean we were running extra sections of trains No. 1 and 2, that being the peak season, we were doing that very thing. That is the reason No. 1 and 2 were fourteen cars and under during that period.

Q. I didn't mean there were four trains; three trains.

[fol. 850] A. Three trains in either direction, two sections of Nos. 1 and 27 westward and two sections of No. 2 and No. 28 eastward.

Q. Well; I can give you the number of cars by days. That might indicate a little more clearly. On the 15th, on the first division, there were, west, twelve; twelve and seven cars, and east, six, ten and nine.

A. Well, now—

Q. That is the number of cars in the three trains?

A. You haven't got the consist?

Q. No, just the total number of cars. On the 16th, eight, eight and seven, that is west, and east, six, nine and nine; on the 17th, eight, eight and seven, west, six, eleven, eleven, east; on the 18th, nine, nine, eight, west, seven, twelve; fourteen, east; on the 19th, ten, eight, five west, six, eleven, ten, east; on the 20th, eight, nine, ten, west, seven, nine, eight, east; on the 21st, nine, nine, eight, west, five, nine, nine, east; on the 22nd, eight, ten, eight, west, six, nine, eight, east; on the 23rd, eight, eight, six, west, seven, eleven, nine, east; on the 24th, eight, eight, eight, west, eight, thirteen and eleven, east.

[fol. 851] A. Well, that is right in the middle of the park season and no doubt we were running two sections of trains, one and two, at that particular time, because that would be a little heavier than we would run any of the single trains. We have no through passenger trains in there, it would necessarily have to be two sections of numbers one and two.

Mr. Strouss: That is all.

Mr. Mason: No questions on re-direct.

The Court: May this witness be excused?

Mr. Strouss: Yes, he may, with the records.

The Court: With the records, you may be excused.

Mr. Mason: We will call Mr. Fertig.

[fol. 852] H. R. FERTIG was called as a witness on behalf of the defendant and being first duly sworn, testified as follows:

Direct examination.

By Mr. Mason:

Q. Will you please state your name and residence to the reporter, Mr. Fertig?

A. H. R. Fertig, Assistant Superintendent of Transportation for the Trustees of the Chicago, Rock Island, Pacific Railway Co., Chicago, Illinois.

Q. What has been your experience in railroad service, Mr. Fertig?

A. I have been in my present position since June, 1936. Prior to that time, from April, 1924 to June, 1936, I was chief of yard and terminal operations for the Rock Island Lines, in charge of freight train and terminal operations. Prior to that time I was supervisor of transportation from 1917 to 1924. Before that time I was a Division Car Distributor Supervisor of transportation on the Rock Island Division and also in the same capacity on the Missouri Pacific and the Ann Arbor Railroad from 1907 to 1917.

Q. What was your first railroad employment, Mr. Fertig?

[fol. 853] A. Well, my first railroad employment was in the track work on the Santa Fe, but I was made Chief Yard Clerk in 1905 on the Rock Island at Shawnee, Oklahoma, for two years, and then went to the Arkansas Division of the Rock Island in 1907 in a Division position as Car Distributor on the Arkansas Division.

Q. You have been in railroad employment since 1905, then, 35 years?

A. Really since 1901, but in 1905 I went into the supervisory work of the railroad.

Q. As Assistant Superintendent of Transportation what are your duties, briefly stated?

A. Now I have general supervision over transportation, more directly in charge of handling of freight train schedules, the handling of perishable freight and livestock, and the general supervision over merchandise, and coordinated truck operations from the railroad side, not the truck operation as a truck, but the railroad portion of the truck operation.

Q. Do you in the course of your duties have anything to do with the assignment of locomotives?

A. No, that is not at the present time a function of the Superintendent of Transportation. That is handled by the [fol. 854] Superintendents of Motive Power on the three operating districts.

Q. Do you become familiar with the assignments of power?

A. Well, only in a general way that we see on our daily reports of freight train operations.

Q. Do you have anything to do with the distribution and assignment of freight equipment for loadings, for transportation on your lines?

A. No, that is not part of my direct work. We have that in charge in our department, but in charge of regular freight car distributors.

Q. You are familiar with the manner in which that is done?

A. Yes, that was my work for a number of years.

Q. Are you familiar with the different types of equipment, both locomotive and passenger cars, owned and used by the Rock Island Lines?

A. Yes.

Q. Is that necessarily a part of your duties as Assistant Superintendent of Transportation?

A. I wouldn't say it was so much a part of my duties but it is common knowledge that in the transportation department we become familiar with those elements.

Q. Are those matters that come under your own observation?

A. Yes, sir.

[fol. 855] Q. Do you have to travel over the system from time to time in the course of your duties?

A. Yes, I travelled very extensively up to a few years ago, not so much now, I am more interested in the reports.

Q. You have made frequent trips over the system?

A. Yes, for 20 years.

Q. You continue to make trips from time to time over the system?

A. Yes, when needed.

Q. I take it that in your experience as an officer on the Division, as well as a general officer on the system you

would become familiar in a general way with the manner in which operations are conducted, trains are operated?

A. Yes, I have direct supervision over and the making of the time freight train schedules, their operations.

Q. Do you know whether the transportation department operates under a set of printed rules?

A. Standard book of rules, yes sir.

Q. You are familiar with that rule book?

A. With the rule book, not so much with the rules; I have no direct contact with the rules.

Q. Do you know anything about the standard code of rules of American Railroads?

[fol. 856] A. No, very little.

Q. Is the Rock Island System equipped with block signals on its main lines?

A. Largely, yes sir, on the more principal rail main lines, it is.

Q. Is there any part of the main lines that you are familiar with which has not block signals?

A. Yes, there is the territory between Memphis, Tenn., and Tucuman, New Mexico, the Choctaw line, which is a main line under the classification of the commission, that is not automatically equipped.

Q. By the way, what is the total mileage, approximately, I think it is in the record already?

A. About 8,400 miles, I think.

Q. Do you know how much of that is double-track or multiple track?

A. Well, only indirectly. No, I couldn't state definitely. I could figure it out mentally in a little while.

Q. The double track is largely in and near terminals or at the eastern end of the System, isn't it?

A. Largely between Chicago and Harrington, Kansas, that is practically all double track but, probably two hundred miles, and it is all double track from Omaha, Nebraska [fol. 857] to Davenport, Iowa, where that line leaves the Chicago to the Texas Lines. It is largely on the eastern portion of the system.

Q. Your company also operates suburban service in and near Chicago, doesn't it?

A. Yes sir, as far as Joliet, 40 miles.

Q. Have you seen the map which was marked for identification, Exhibit 53?

A. The Rock Island map?

Q. Yes.

A. Yes sir, I furnished the information for the detail in the map.

Q. You have seen the map since it was prepared and offered for identification?

A. Not since it has been offered, but I had a copy of it before I came here.

Q. You are familiar with that map, are you?

A. Yes, sir.

Q. Will you say whether or not that is a reasonably correct outline map of the Rock Island System and the territory in which it operates?

A. Yes, that is reasonably correct as a sketch map. It is very probably not correct as to contours and scale, but it is representative.

Mr. Mason: We offer the map in evidence as Defendant's Exhibit 53.

[fol. 858] Mr. Strauss: The same objections.

The Court: Objections overruled. It may be admitted.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 53.")

Mr. Mason:

Q. Mr. Fertig, were you furnished in advance of your appearance on the stand with copies of Defendant's Exhibits Nos. 2, 3, 4, 5 and 6?

A. I was furnished copies of the proposed exhibits at the time they were prepared, but not since they have been entered here, the one showing the development of freight equipment, passenger equipment and power.

Q. Those are the exhibits to which I refer.

A. Yes, I have copies.

Q. Now, will you just look at your copy of Exhibit No. 2, which bears the title "Chronology of Freight Boxcars, Southern Pacific Co."

A. Yes sir.

Q. Will you state whether from your observation of Rock Island equipment the development of boxcars owned and used by the Rock Island has generally been along the same lines as indicated by the exhibit?

A. Yes sir, our equipment has been developed practically along the same lines as the sketch has outlined here. [fol. 859] Q. Will you say whether or not your Company now uses largely steel or steel underframe boxcars in the handling of freight?

A. We use entirely, when using cars of our own, our own ownership, the steel underframe, steel superstructure cars. We don't own any solid steel cars.

Q. Do you have any cars of wooden center-section construction?

A. Not in revenue service, we haven't.

Q. All of the cars of your ownership in revenue service are either steel underframe or the other steel characteristics that you have just stated?

A. That is right. We found the last wood underframe car on our line in revenue service a short time ago and withdrew it, the last car.

Q. Will you refer to Exhibit No. 4, which is the exhibit showing the chronology of Southern Pacific coach and chair-car designing and improvement. From your observation of Rock Island passenger equipment, would you say whether or not it has been developed along somewhat the same line as indicated by this exhibit?

A. I would say that represents the development of the Rock Island passenger equipment.

Q. Do you have any wooden passenger equipment now [fol. 860] in service?

A. No, I don't believe we have a single car; the last wood frame equipment in passenger service was in a mine train between Peoria and Pekin, Illinois, which has been abandoned about six or seven years. There was none in revenue passenger service for a considerable length of time.

Q. Do you use any wooden passenger cars in the suburban service at all?

A. Not at all; they are solid steel.

Q. Do the developments of passenger car equipment on your line include cars similar in appearance to the Articulated units shown for 1937 and 1939?

A. Yes, we have the Articulated equipment in our rocket trains operating from Chicago to Denver, from Minneapolis to Houston, Texas.

Q. The Rock Island operates certain passenger trains in through service with the Southern Pacific, does it not?

A. Yes, sir.

Q. Will you identify those trains by name?

A. The Golden State Limited, Nos. 3 and 4; the Californian, Nos. 1, 12 and 13, I believe; we call them the Californian.

Q. Isn't it numbered 43 and 44?

A. 43 and 44. They were at one time numbered 1 and [fol. 861] 2.

Q. Are those the same trains bearing the same names and perhaps the same numbers, which operate across the state of Arizona, including the city of Tucson?

A. They are, yes. We will have another one the fifteenth.

Q. What will that be?

A. The Phoenix Rocket.

Q. Also called the Arizona Limited?

A. The Arizona Limited. That will be a Rocket.

Q. Not a steam train?

A. No.

Q. That is not a steam train on the Rock Island?

A. No.

Mr. Strouss: I am trusting to my understanding that my objections heretofore made went to the oral testimony as well as to the exhibits?

The Court: The record may so show and it is overruled.

Mr. Mason:

Q. Does your Company handle Pullman equipment in its through passenger trains?

A. Yes, sir.

Q. Is that in many cases the same Pullman equipment which is handled in the through Southern Pacific Passenger trains operated jointly with your Company?

[fol. 862] A. Yes, there are through-Pullman cars from Chicago to the Pacific Coast and from the Pacific Coast to Chicago in connection with the joint operation of the through-service.

Q. Those are Pullman cars of standard type?

A. Standard Pullmans, yes sir, and also standard tourists on the Californian.

Q. Will you refer to Defendant's Exhibit No. 5, the chronology of freight locomotives on the Southern Pacific and, looking at that exhibit, state whether there are types of locomotives now used by the Rock Island which correspond to any there shown?

A. The development of the locomotive has been practically the same as that outlined in this exhibit, except we do not go as far as the Southern Pacific in the development of the Articulated Consolidation Engine. We don't own any of those. The 2-10-2 is the largest engine we operate in freight service, largest engine we own.

Q. If you recall, what is the approximate tractive effort of the largest types of 2-10-2 freight locomotives that the Rock Island now owns and uses?

A. About 84,000 pounds tractive effort.

Q. That would be slightly larger than the 2-10-2 shown on exhibit 5?

[fol. 863.] A. Yes; I think 75,150 lbs. is the standard tractive effort of the 2-10-2, but through additions and betterments on them, we have increased our present 2-10-2 from 82,000 to 84,000 pounds.

Q. Do you use a Mikado type of locomotive in freight service?

A. Yes, we have some Mikado type, but it is being displaced largely by the 4-8-2 the 5,000 class engine on our line.

Q. The 4-8-2 is a type not shown on this exhibit?

A. You show a 4-10-2. We have a high speed, high wheeled freight locomotive, 4-8-2, which is interchangeable in freight and passenger service.

Q. I will ask you to look at exhibit No. 6, showing the passenger locomotives, and tell me whether the 4-8-2's, to which you have just referred correspond to any locomotive shown on that exhibit?

A. The 4-8-2 Mountain type is the 4,000 class of the Mountain type engine of the Rock Island. That engine is identical with our largest passenger engine.

Q. And that is the engine that is also interchangeable with freight service?

A. No, that is strictly a passenger engine.

Q. Your 4-8-2, used in both freight and passenger service [fol. 864] i.e., then is a more powerful locomotive than the Mountain type shown on Exhibit 6?

A. It is; and if I may correct my statement, it is not a 4-8-2 engine, it is a 4-8-4 engine, the freight engine.

Q. What nominal classes do you use? Do you call it the 4-8-4's?

A. Yes, the 4-8-4.

Q. You do have a Mountain locomotive?

A. Yes, that is the type that corresponds to your 4-8-2.

Q. You use a Consolidation type in freight service to some extent, do you?

A. On the lighter divisions and on local trains, not the heavier, denser territories.

Q. Do you have a Pacific type locomotive on the Rock Island?

A. Yes, we have a Pacific type on the lighter passenger trains.

Q. Used at times in freight service also?

A. Not regularly, just occasionally in case of breaking them in; they are not regularly assigned to both freight and passenger, they are strictly a light passenger engine.

The Court: Mr. Mason, we will take a 10-minute recess at this time.

[fol. 865] (Thereupon the Court stood at recess.)

[fol. 866] Mr. Mason: Mr. Fertig, do you know and if so will you state whether the Rock Island maintains or participates in schedules for the transportation of freight over its main line.

A. Yes, we do; between Tucumcari, New Mexico, and Chicago, Illinois; between Denver, Colorado, and Chicago and between Minneapolis and St. Paul and Chicago.

Q. Do you also have schedules for freight originating in south Texas and coming to you at your north Texas gateways?

A. Yes, we have schedules out of Fort Worth, beginning at Galveston, Texas, but striking our main operation at Fort Worth, Texas; but there are not as many through schedules as the more prominent gateways of Tucumcari and Denver from the West.

Q. You speak of Tucumcari and Denver. Are those your gateways with other railroads at which you interchange the so-called "transcontinental" traffic?

A. Yes, those are the two important gateways. We also interchange some north Pacific Coast traffic through the Twin Cities, Minneapolis and St. Paul.

Q. By "transcontinental traffic" you understand I mean traffic moving to and from Pacific Coast and related territory? [fol. 867]

A. That is right, in central and southern California territory.

Q. That would include Arizona, wouldn't it?

A. Yes, the Salt River Valley and the Yuma territory as we designate it.

Q. You speak of the Tucumcari gateway. With what railroad do you connect at Tucumcari?

A. The Southern Pacific.

Q. Do you maintain through schedules with the Southern Pacific eastward and westward between Chicago and related points on the one hand and California and Arizona points on the other?

A. Yes, we do, and also between the Memphis territory and the Southern Pacific connection at Tucumcari.

Q. That is to say you have east and westbound schedules between the southeastern United States through the Memphis gateway and the Pacific Coast and Arizona?

A. Yes, we have.

Q. What type of traffic predominates in the eastbound movement through the Tucumcari gateway?

A. Perishable freight.

Q. What type of equipment does that perishable freight carry?

[fol. 868] A. Standard refrigerators, practically all Pacific Fruit Express.

Q. Do you operate those Pacific Fruit Express cars over the Rock Island to and through Chicago?

A. Yes, we handle them over our line. We are not a party to the ownership but we handle the cars.

Q. You receive those cars from the Southern Pacific at Tucumcari, do you?

A. Yes, sir.

Q. Do you return the empties through that point to the Southern Pacific?

A. Very much so, yes, we do.

Q. What type of traffic do you handle in westward movement through the Tucumcari gateway jointly with the Southern Pacific?

A. Largely manufactured products, merchandise and an increasing amount of livestock for the Arizona-Phoenix territory and the Coast.

Q. What is the schedule expressed in hours and from what point or points does it apply relating to the movement of the perishable traffic eastward handled jointly as you describe by the Southern Pacific and the Rock Island?

A. The through schedule from the Colton, California, territory to Chicago has always been expressed as the 146-

[fol. 869] hour basic schedule with 16 hour run-off. On the 25th of July, 1940, we shortened that schedule by 6 hours and 30 minutes, making a 139 hours and 30 minutes schedule.

Q. It still contains the provision for the 16 hour run-off, doesn't it?

A. Yes, it includes the provision for the 16 hour run-off but in effect for the last two or three years on account of the situation in the Colton territory as to pre-cooling and other requirements it has been more of a 19 hour run-off than it has been a 16-hour.

Q. Was that schedule always at 146 hours or was it originally some greater figure?

A. As I recall, the build-up of the schedules, that schedule started out with something like 171 hours.

Q. That was around 1920 or 1922, wasn't it?

A. I would have to be corrected on that.

Q. If you don't recall precisely—

The Court:

Q. Mr. Fertig, when you say a run-off of 16 or 19 hours, do you mean you have that much latitude on your schedule?

A. No, it is not what you would term "latitude." Your Honor. The basic schedule is due out of Colton at 3 A. M. the first morning after the loading day, but shipments are [fol. 870] accepted up to 7 P. M. or 16 hours later than the basic 3 A. M. and that 16 hours is required to be run off by the carriers so that that car will make the same 146 hour delivery in Chicago as the car which left at 3 A. M.

The Court: It means expediting the schedule on the cars that come in late?

A. That is right, and yet really it is a schedule 16 hours faster than the first train which was scheduled out at 3 A. M. The situation as to the Imperial Valley and the Yuma district, that schedule is shorter by 12 hours than the schedule from Colton. That territory as I recall has a 9-hour run-off.

Mr. Mason:

Q. That is to say shipments will be accepted so as to leave Yuma 9 hours later than the starting hour from which the schedule operates?

A. That is right. In other words, the basic schedule is due out of Yuma at 10 A. M. and they will accept cars

up to 7 P. M. at Yuma and put them into Chicago on the same arrival hour as the basic schedule leaving at 10 A. M. in the morning.

Q. Is there a schedule also from the Salt River Valley?

A. The basic schedule from the Salt River Valley is due out of Phoenix at 12:01 A. M. the first day after the loading [fol. 871] date with a 3-hour run-off, that is, up to 3 A. M. cars will leave and overtake and make the same arrival at Chicago.

Q. Then to answer His Honor's question succinctly, the run-off means that the later cars will be so run in their trains as to run off the time interval between their departure and the departure of the first schedule of that day?

A. That is true, and that is brought about by the fact that all perishable freight in these three main producing territories is not all produced close to the departing terminal. In other words, that gives the shipper at the outskirts the same privilege in Chicago as the men who may have his orange groves close to Colton terminal. It puts the consignee on the same basis and therefore it is necessary for the trains leaving after the basic hour to run that much faster than the basic schedule.

Q. From the standpoint of the marketing of fruit at Chicago what is the effect of this run-off upon the various producers which you say are located at different distances from the concentration point?

A. It puts them all on a parity. They all have the same market privilege. The guaranteed schedule provides that [fol. 872] Chicago traffic will be available for 7 A. M. delivery the seventh day from Colton, the sixth day from the Imperial and Yuma districts and the fifth day from the Salt River Valley district.

The Court:

Q. Is there a penalty for failure to maintain that schedule?

A. There is this penalty, Your Honor, that it is always subject to a market loss in the form of a claim, a claim for a market loss. There is no penalty in the sense that sometimes the extra fare train carries a refund if it doesn't make its schedule, but you are subject to a claim without recourse because it is a guaranteed schedule.

Mr. Mason:

Q. You mean, for example; if the oranges were worth five dollar a box on the date when they should have been delivered and only four dollars a box on the date when they were delivered, the carrier might be subject to a claim for the difference because of loss of market.

A. He is, yes, and he has very little ground to stand on to void such claim because that is an agreed guaranteed schedule by the Association of Railroad Executives.

Q. Is the Southern Pacific a party to that schedule with the Rock Island through Tucumcari?

A. Yes, I am sure they are, all of the western railroads [fol. 873] are parties to the schedule.

Q. You speak of the run-off time. Is a portion of that time assigned to the Rock Island to be run off?

A. Yes, it is. Up to 9 hours from Colton. The Rock Island and the Southern Pacific or reversed, the Southern Pacific and the Rock Island divide the run-off, each line running off—that would be 6 hours—3 hours and one-half. After the 9 hours the Southern Pacific runs off a little more than the Rock Island because of the greater distance they haul the freight as compared with the limit of the run-off territory which is Herington, Kansas only about 400 miles beyond the junction point between the Southern Pacific and the Rock Island.

Q. When you speak of the limit of the run-off territory, does that mean the time which must be run off must all be accomplished by the time the traffic reaches Herington?

A. That is true, it must all be run off before the train leaves the last terminal, before the arrival at Kansas City.

The Court: Why is that, Mr. Fertig, because of the densely populated area there slows you down?

A. Your Honor, as near as I can answer that is by saying that Kansas City is a very important distributing center for [fol. 874] perishable freight and if we did not give the Kansas gateway the same benefit of the on-time performance on perishable freight as Chicago would get, or St. Louis, which is also one of the guaranteed points, then freight could move by Kansas City so late that Kansas City lines would not be able to compete in the business on the through haul while we might have the business on time at St. Louis and Chicago, so to protect the important trade

center we give Kansas City on-time performance on the same basis as we do Chicago or St. Louis.

Mr. Mason:

Q. That also enables your company to compete for traffic which may be destined for Kansas City instead of Chicago or St. Louis?

A. Yes, it does that, but on the other hand it also enables the Kansas City-Chicago-St. Louis lines to compete with traffic which we could handle through to Chicago and St. Louis and which we would very much like to have.

Q. You mean lines like the Alton?

A. The Wabash has been probably more aggressive, probably they get about half of the perishable freight from Chicago that we bring into Kansas City. I simply state that so elaborately to show that the eastern bound freight schedules are largely controlled by the interest of the producer and receiver of perishable freight.

Q. Now as to the westbound, do you have a guaranteed or an advertised schedule held out to the shipper for the movement of westbound freight?

A. Yes, all lines now guarantee a six-morning delivery on the Pacific Coast with an arrival not earlier than 11:30 P. M. on the fifth night.

Q. Does that mean that freight loaded at Chicago will be delivered in Los Angeles on the sixth morning?

A. The sixth morning up to I think it was the fifth of July, 1940, it was the seventh morning guaranteed delivery but on account of the fact that the carriers did arrive on the fifth night there was nothing to be gained by holding the freight over and it was opened up for sixth day delivery.

Q. Does that guarantee of the sixth morning delivery represent any reduction in the scheduled delivery time as compared to earlier years?

A. Yes, that represents at least two days' better service from the Middle West to the Pacific Coast than they have had in previous years. It is one day better than they have had for the last five or six years.

Q. Prior to that was there a longer schedule?

[fol. 876] A. As I recall, in the earlier days westbound schedule it was the eighth day.

Q. That was about 1930 or 1932?

A. Something like that. I didn't come into the direct handling of freight schedules until 1936 but it was largely the westbound movement of the automobile and accessories which brought about the better schedule westbound.

Q. Does the schedule contemplate corresponding deliveries at points in Arizona to correspond to the shorter haul?

A. Yes, it produced a four day delivery at Phoenix and correspondingly shorter time to Tucson and El Paso, Texas, than in previous years.

Q. Are you familiar with the extent to which your company makes delivery of the eastbound perishables in accordance with the schedule requirements.

A. At the eastern gateways?

Q. Yes, or at Chicago.

A. Yes, sir.

Q. What is the approximate percentage according to the knowledge gained by you in your position of on-time deliveries in accordance with this schedule for any typical recent period.

A. Speaking of our own line, I say that our on-time performance represents 100 per cent from the Colton territory and not less than 98 per cent from the Salt River Valley and the Imperial Valley.

Q. Do you have corresponding on-time performance on traffic destined through the Memphis gateway?

A. Well, I wouldn't say that it is nearly as 100 per cent on time on account of the light traffic over that particular territory. The trains handling the eastbound perishable freight also are required to handle the ordinary freight so I would say that the on-time performance through the Memphis gateway would be about 85 per cent.

Q. Does your line handle this perishable traffic or interchange with eastern connections at or near Chicago?

A. Yes, we take it into the outer yard at Chicago, indicated as our Blue Island yard, where the greater portion of it is delivered to the eastern lines through the Indiana Harbor Belt.

Q. That is a local terminal line around Chicago is it?

A. Yes, that is an intermediate and switching line.

The Court: Do I understand you to say that you had a westward movement of livestock through the gateway of [fol. 878] Tucumcari?

A. Yes, Your Honor, there is a very extensive movement of hogs to this Tovrea—if that is the name—at Phoenix, and also to Los Angeles. There is a substantial movement of hogs from the Oklahoma City market.

The Court: But not cattle.

A. No, not cattle, it is practically all hogs. I don't know of any westbound cattle movement.

Q. I didn't think it was possible that cattle were moved westward?

A. No, neither cattle nor sheep. We get a great many cars of sheep from the Colton territory in California for eastern pastures and markets.

• Mr. Mason:

Q. You have quite a movement of lambs to mid-western markets out of Arizona every spring?

A. Yes, we do, they are lambs rather than sheep. I would like to add to my statement of on-time performance that St. Louis is an important eastern gateway on perishable freight and I would say that the on-time performance into the St. Louis distance would be 100 per cent on all California and Arizona perishable freight.

Q. You spoke of the interchange with the Indiana Harbor Belt at Blue Island near Chicago?

[fol. 879] A. Yes, sir.

Q. Does the Indiana Harbor Belt hand that traffic over within your knowledge to eastern trunk lines?

A. Yes, they do. They have a set schedule of deliveries on all eastern perishable freight and have what is termed a "cut-off hour" after which they will not guarantee a connection with the eastern line train.

Q. What are these eastern lines by name?

A. The principal perishable freight lines are the Erie first, the Pennsylvania, the B. & O., the New York Central, the Michigan Central, the Grand Trunk. I don't infer that that is in the order of their importance but I do place the Erie first. The others are just responsible eastern perishable freight carriers and also in connection with that movement there is a guarantee on the part of western lines which is not participated in by the eastern carriers, a guarantee that we will make this train. The eastern line does not guarantee that we will make it.

[fol. 880] Q. That is the same character of guarantee that you hold out for delivery to the Chicago Auction?

A. On the team-track and on the Chicago Produce Terminal Auction.

Q. Suppose you failed to make this guaranteed delivery to the eastern connection, does any claim arise on behalf of the receiver at the point of delivery on the eastern seaboard?

A. I will answer that from a transportation standpoint only, that I handle a large number of claims which are the result of a failure to make the New York and Boston markets, and we are called upon to support our on-time delivery to the eastern line at Chicago. If, for any reason, we are late on our cut-off and the car doesn't move on the designated so-called seven A. M. train, then we are responsible for the claim. If the car has made the seven A. M. train and the delay is on the eastern line, then it is their responsibility.

Q. Have you the figures to show the total volume of the perishable traffic received by you from the Southern Pacific at the Tucumcari gateway during 1939?

A. We had approximately 43,000 cars of eastbound perishable freight through Tucumcari during the year 1939 and [fol. 881] up to the first of December, 1940 the total has been 42,500 cars so that when December is in the figure for 1940, it will probably be a little better than it was last year.

Q. Those 43,000 cars in each of these last two years, including the current year, represents perishable freight originating largely and almost entirely in California and Arizona, and handled by the Southern Pacific to your line at Tucumcari, is that correct?

A. Yes, practically all of it. There is some movement through the Nogales gateway of Mexican perishables, which is a very small proportion of the total.

Q. When the perishable freight comes to you from the Southern Pacific, are the cars grouped in trains, or by blocks, and, if so, how are they designated?

A. The Southern Pacific has a system of block identification, which is not carried out on the Rock Island beyond Tucumcari.

The Court: What do you mean by a "block"?

A. A block, your Honor, identifies the time that particular bunch of cars left the point of origin, and which determines how much run-off there is. They number those blocks—I [fol. 882] will not state definitely, a Southern Pacific man

can better state, but I know the blocks are running as high as 674 and 675. Block 674 may have left Colton at three A. M., which Block 675 might not have left until ten o'clock, but they would all come into Tucumcari in the same train. They maintain the identity of the cars in those individual blocks; we don't do that.

Q. Do you identify the cars in any other way on your line?

A. Yes, we have a system of symboling each individual car. We have assigned to the different stations on our line of such importance as to originate high-class traffic, a series of numbers and identifying code, and whenever a car of that class of traffic is loaded and billed at that station it is given a code and a number, so at Tucumcari the Tucumcari station symbol CA is stamped on each waybill and a consecutive number is given to the cars in that train. That is our identification of the car.

Q. That is how you follow it along the line?

A. Yes, that is telegraphed to Chicago with the car number and the contents, the point of origin, consignee, destination, and routing. That is the way we maintain our records [fol. 883] in Chicago by the individual car, although we do keep a record of the block, but not from an operating standpoint. We carry that record through to Chicago on our daily reports, but nothing to do with the individual car in the block.

Q. That is for the purpose of informing the shipper and perhaps the Southern Pacific of the progress of the block, isn't it?

A. That is right, we make a back report to the Southern Pacific and our Pacific coast representative, showing the time the individual blocks arrive at Kansas City, Chicago and St. Louis.

Q. Did you for the purposes of this case make a study of the handling of freight trains between certain terminals during the first ten days of April, 1939?

A. Yes, we were requested to make a survey and an exhibit of the movement of freight trains in each direction over a representative portion of our railroad during a normal period of ten days. In order to do this, we arrived at the first ten days of April as being a representative average period of operation.

Q. Did you prepare a statement entitled "The Chicago, Rock Island and Pacific Railway Company, Typical Ex-

amples of Freight Trains Handled between Certain Terminals, April 1st to 10th, inclusive, 1939."

A. We did, we prepared that statement under my supervision.

Q. Was it prepared in your office?

A. No, it wasn't prepared in our office. It was prepared in the office of Record of Car and Train Performance by the auditor of car accounts in Chicago, who has the wheel reports of all trains on file.

Q. Did you supervise its preparation in that office?

A. I supervised the preparation of it to the extent of knowing the source of the information and checking the record to see that it was properly compiled on the basis of the requested detail.

Q. Do you know the method followed in preparing it?

A. Yes, sir, we outlined how it would be determined so we would get all of the record.

The Court: Who selected this period April 1st to 10th?

A. We selected this period by taking all of the operating records, that is, the operating sheets as we term them, for the divisions over which these trains operated for the year 1939, and took the high and low periods and arrived [fol. 885] at this as being an in-between or average period of time, not a low, or not a high. If we had chosen the first of May, we would have probably distorted the record by the fact that then we would be developing our grain car supply for our June and July grain movement, which would have a tendency to show an abnormal train haul. We took this particular period because the winter vegetable movement had been dropping off so we were about normal over this particular territory.

Mr. Mason: Irrespective of your inspection of the records, and relying solely upon your own knowledge, would you say the month of April, and particularly the first ten days of April, are reasonably representative of the average year, generally speaking, on the Rock Island?

A. Yes, I would say they were reasonably representative of the average performance. Our railroad is one of high peaks, and this would be representative of the average business we handle for the railroad.

Q. And representative likewise of the average movements of long as well as short trains?

A. Yes, it would.

Mr. Mason: I should like to have this statement marked for identification.

[fol. 886] The Clerk: Defendant's Exhibit No. 73 for Identification.

Mr. Mason: From what sources was the information upon Defendant's Exhibit 73 taken?

A. They were taken from the original records of the conductor handling the individual trains over the several divisions and subdivisions included in the exhibit.

Q. Are those the so-called Conductor's Wheel Reports that you referred to?

A. They are the conductor's wheel report, the original record.

Q. Has any check of this information been made against the dispatcher's train sheets?

A. It was made against the dispatcher's train sheet to the extent of determining the engine number on the train over each subdivision so that we would know that we had taken the total number of trains operated over the district.

Q. Then this represents all trains operated over these particular districts during the period studied?

A. All trains except light engines without cabooses.

Q. What is the source of the information of ruling grade, Column F?

[fol. 887] A. That was taken from the condensed profile of the line between the points indicated in the second and third columns of the exhibit.

Q. Do you have in the court room the conductor's wheel reports which were used in the preparation of this exhibit?

A. I have.

Q. Do you have the dispatcher's train sheets?

A. I have.

Q. Do you have the condensed profiles which were used in obtaining this ruling grade?

A. I have the condensed profiles between Chicago, Illinois, and Tucumcari, New Mexico, the territory covered by this exhibit.

The Court: May I interrupt with a question. The exhibit shows that it is between certain terminals. In your state-

ment a moment ago you said between Chicago and Tucumcari. Do I understand it covers the entire operation between Chicago and Tucumcari, or just certain sections?

A. No, sir, this exhibit covers the entire territory between Chicago and Tucumcari in both directions.

Mr. Mason: You have a number of intermediate terminals in that territory?/

A. Yes, the Rock Island like, I presume, all other [fol. 888] railroads, is broken up into operating divisions, and those divisions are likewise broken up into subdivisions which represent ordinarily the train mileage as between terminals. In some cases, as may be brought out, the train was operated even between points, which are not both subdivision terminals. For instance, if the train came down the Chicago to Tucumcari line to Bureau, which is west of Chicago, and continued on down an auxiliary line to Bureau, Illinois, the mileage on this exhibit only shows between the main line operated points, or Blue Island Yard, and Bureau.

Q. I notice you have referred in your testimony to the entire line between Chicago and Tucumcari, whereas the exhibit refers to Blue Island, as I see it, the most easterly point.

A. Of course, Blue Island is not Chicago, but it is only separated from Chicago by a street, and we term everything Chicago. Blue Island and, in fact, our yard, Burr Oak, which we more usually refer to, is in Blue Island, and all of them go to make up the Chicago territory.

Q. Is it correct that Blue Island is the location of your terminal yard, at which your through freight trains carrying freight to and from Chicago originate and terminate?

[fol. 889] A. They originate and terminate at Blue Island, lying in Burr Oak yard.

Q. Will you refer to Exhibit 53 in evidence. You show in heavy black line a portion of the system between Blue Island and Tucumcari. That is the district to which this freight train operating exhibit relates, is it?

A. That is true. Blue Island is 17 miles from the La Salle Street terminal in Chicago, which is the terminus of the Rock Island Railroad. The freight operation begins and ends at Blue Island. Everything east of Blue Island in Chicago is handled in yard transfer service and not by train.

Q. That was not a transfer operation from Blue Island?

A. Purely a terminal transfer operation.

Q. You say you have all of these underlying documents present in the court room. Are they available for the use of opposing counsel?

A. They are, separated as between operating divisions and days from April 1st to 10th, inclusive.

Q. You spoke of the conductor's wheel-report. Will you take one of those out of the package. Is the conductor's wheel report a record of the cars in the train in their order from the caboose to the engine?

[fol. 890] A. Yes, it is. The wheel report originates in the dispatching terminal, where it is set up in that order from the caboose to the head car in the train.

Q. And lists each of the cars by initial and number and whether loaded or empty?

A. That is right, and contents and destination is put in by the yard. The conductor fills out the distance hauled and the point where he set the car out, and if he picks up cars on the line he adds those to the original wheel report which he had leaving the terminal.

Q. Does the conductor make any check of the wheel report against any other documents in his possession?

A. He has to have under our operating requirements the waybill for each loaded car or empty tank car, and an empty slip bill for each other car in his train which is empty. As soon as he can, if he does not do it before he leaves the terminal, he must do it at some point after leaving the terminal check his wheel report against the date for forwarding the car, either the waybill or the empty slip bill to determine that he has authority for handling the car in his train.

Q. Does the wheel report also show the time of departure at the original terminal?

[fol. 891] A. It does. It shows the time of departure from the original terminal and the time of arrival at the final terminal, but no other intermediate information unless he handles livestock; then he very properly makes a record as to the requirements under the 28-hour or 36-hour law.

Q. Does it show the miles from terminal to terminal?

A. Yes, he shows the miles and it shows the miles that he handles the car either loaded or empty.

Q. Does it show the name of the conductor?

A. Yes, and the engineer.

Q. And the number of the locomotive?

A. Yes.

Q. Does it show the number of the train if there is a different designation than the number of the locomotive?

A. Yes, it does if he operates as a regular schedule train. Otherwise, he simply writes "Extra" in front of the engine, or makes an "X" to indicate extra. I might say in connection with the importance of that record on our railroad, that is the source from which the auditor of car records secures his information as to the gross and net ton-miles and loaded and empty car-miles.

Q. Did you from the use of the wheel report determine [fol. 892] which were perishable loads and which were other loads in the train which you studies and which are shown on Exhibit No. 73?

A. Yes, in order to determine that separation which was requested as between perishable freight and non-perishable freight it was necessary to go to the wheel report to determine that information, as the train sheets do not separate as between classes of commodities in cars.

Q. Has Exhibit 73 for Identification been checked as to its details of these underlying sources to determine its correctness?

A. Yes, it has been checked.

Q. Did you participate in that check?

A. Yes, I did.

Q. Will you say whether or not from that check the exhibit is true and correct?

A. To the best of my knowledge and belief it is correct.

Q. I notice on the second sheet in a block at the foot of the sheet there are certain computations. Were those computations made from the other data appearing on the face of the exhibit?

A. They are the reduction to percentages and the total number of trains in each separation in the exhibit.

[fol. 893] Q. Were those computations made by yourself or under your direction?

A. They were made under my direction, but not by me personally, because this was prepared by the force of the auditor of car accounts as to the detail and the original typing was done by the general auditor.

Q. Has the computation been checked to determine its correctness?

A. Yes, the computation has been checked to determine the accuracy of the percentages and the number of trains?

Q. These computations are capable of check from the face of the exhibit, are they not?

A. Yes, they are. The individual record, A, B, C, D columns, could only be determined by a check of the wheel reports, of which there are 1,021. I think we were rather elaborate in our preparations, but at least we have a comprehensive picture.

Mr. Mason: We offer the exhibit as Defendant's Exhibit 73.

Mr. Strouss: Mr. Fertig, in response to the question of counsel or the Court as to how you happened to take this period, you stated, "We took this period." Who do you mean by "we"?

[fol. 894] A. I mean by "we" those who were designated to determine the proper period of time to cover by the exhibit.

Q. Who was designated?

A. Mr. Siddall was the officer in charge of determining that information. At the time the request came for this detail, I was not available in Chicago and in order to expedite the record the general auditor assigned Mr. Siddall to work on the matter until I returned to Chicago. On my return to Chicago, he and I worked together on the matter; and I approved of taking this particular ten days from my personal knowledge and perusal of the records, which had been gone into to determine the proper data.

Q. You say your road is a road of peak movements, high and low. Of course you mean by that, volume?

A. Yes, car volume as well as tonnage volume.

Q. In arriving at this average, do you mean the average taken of the volume traffic to arrive at your typical ten-day period?

A. Well, I would say that would be a reasonable statement, yes.

Q. You didn't then go into it to determine the typical train movement rather than the volume of traffic [fol. 895] moved?

A. Only to the extent that we are conversant with the fact that during our peak movements we have a longer train haul than we do during a slack period of business.

Q. These wheel reports, of course, only refer to the particular train. They don't purport to show all of the trains that were moving at that time, or to show how many trains may have been moving on that division at that time, or on any division?

A. I hope I understand what you mean, but I will say this, that it does include during that ten-day period all freight trains that were moving on any one or all of the ten days.

Mr. Mason: You mean Exhibit 73?

A. Yes.

Mr. Strouss: The wheel report upon which that is based. There are a number of wheel reports?

A. Yes—for that day?

Q. Yes.

A. This one I handed counsel contained all of the wheel reports for that particular division for that day and in that number are all of the trains over this particular territory which operated in both directions on that day.

Q. Except light trains?

[fol. 896]. A. Except light engines returning from helper service, or braking engines over the road which are not in charge of train crews.

Q. When you stated that it showed the movement from Chicago to Tucumcari, you don't mean that it showed the train moving all the way from Chicago to Tucumcari, but you mean different trains that were operating on different divisions during that particular day?

A. Yes, sir, that is true. It is all trains over all subdivisions on all days, not the individual train identified through from the point of origin to its final destination.

Q. And each train on its subdivision is counted as a train?

A. That is true. That is a train until it is released by the crew.

Q. And it is a train for each subdivision through which it passes?

A. That is true, or for any distance over the line if it comes under the designation of a train.

Q. What I was trying to bring out is, if you start a train from Chicago and it passes through several divisions, it

would be counted—if it passed through four divisions, it would be counted as four trains?

[fol. 897] A. Yes, four divisions to make it more definite, but also if it operated from one subdivision terminal to another subdivision terminal only, it would be one train.

Mr. Strouss: We have the same objection.

The Court: The objection is overruled. It may be admitted in evidence.

Mr. Strouss: And the further objection to this exhibit that we made to the others of the same type, that it is a selection of typical days and is calling for a conclusion.

The Court: That objection is also overruled.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 73.")

Mr. Mason: Referring to Exhibit 73, the types of locomotives which you show here in various columns, are those the same types to which you referred in your testimony in discussing Defendant's exhibits 5 and 6 and your own locomotive equipment?

A. Yes, those are the types of engines I referred to; the Mikado, the Mountain type, the 4-8-4, the Consolidation engine over the territory until we reach Dalhart, Texas, and there it takes up the 2-10-2. That is the only division or subdivision on the railroad where the 2-10-2 engines are used, so they do not show in any train records east of Dalhart, Texas.

[fol. 898] Q. You have included trains performing local service as well as through trains on this exhibit.

A. Yes, all trains which were handling cars.

Q. I notice here, for example, a train operating, a number of trains, eight altogether, operating 57 miles between Silvis, Illinois, and Columbus Junction, Iowa. Is that distance of 57 miles an entire subdivision?

A. That doesn't happen to be a subdivision, as I stated, that is a local subdivision. In other words, that record indicates the local trains operating between Silvis and Columbus Junction, which was the terminus of the local. You will find several cases of that kind, and in the opposite direction you will find Columbus Junction to Silvis. That is the eastward movement of the same local trains.

Q. Is there another example in the operation over 46 miles between Washington, Iowa, and Elden, Iowa?

A. That is a continuation. Now, that operation of those two trains in there cover the one subdivision between Silvis, Illinois, and Elden, Iowa. The first local operates between Silvis and Columbus Junction in both directions, in each direction, then there is a local operates from Elden, [fol. 899] Iowa, east to Washington, Iowa, 46 miles, turns at Washington and runs from Washington back to Elden. That is his day. There is a territory between Columbus Junction and Washington, about 22 miles, where there is no local service, because there is only one unimportant station in there and it doesn't require any local train in there.

Q. If any service is required, it can be done by a through train?

A. By trains operating between Elden, Iowa, and Silvis, that distance of 120 miles.

The Court: The Court will be at recess until ten o'clock tomorrow morning.

(Thereupon, the Court stood at recess until Thursday, December 5, 1940, at 10 o'clock A. M.)

[fol. 900]

December 5, 1940, 10:00 A. M.

All the parties being represented as heretofore noted, proceedings were resumed as follows:

The Court: I believe you were still on the direct examination of Mr. Fertig?

Mr. Mason: That is correct, yes sir.

The Court: You may proceed.

H. R. FERTIG, a witness called on behalf of the defendant, resumed the stand and testified further as follows:

Direct examination (Cont'd).

By Mr. Mason:

Q. Mr. Fertig, in the course of your testimony you spoke, I believe, of the receipt of perishables from the Southern Pacific to be delivered to your line at Tucumcari, New Mexico, for continued eastward movement. Now, does the perishable traffic come to you in solid train loads at Tucumcari during the busy season?

A. It comes to us in practically solid train loads. Not all of it for the main line territory covered by the exhibit, that is, between Chicago and Kansas City and Tucumcari. Part of it goes out over the Texas and Mexico Lines, but it is largely in solid trains.

[fol. 901] Q. You continue to handle it in solid trains from Tucumcari eastward?

A. Yes, our movement out of Tucumcari is entirely governed by the trains into Tucumcari.

Q. Well, for example, if the traffic moving to Kansas City and points beyond via the main lines through Dalhart and Harrington is in a block of 70 cars, do you carry it forward in a block of 70 cars?

A. Yes, we do, we take the main line business in the one train.

Q. Now, do you ever consolidate trains turned over to you at Tucumcari, or blocks turned over to you at Tucumcari, into larger trains?

A. We are not able to consolidate the trains at Tucumcari for the reason that the grade between Tucumcari and Obar, about 50 miles out of Tucumcari, is such that 3,500 tons is the load limit over that grade, so therefore, when the Southern Pacific brings in two trains we are required to operate two trains out of Tucumcari, but when those trains are so operated into Tucumcari that they can be consolidated at Dalhart, Texas, the first terminal out of Tucumcari, then we can consolidate two of the Southern Pacific trains into one consolidated train beyond Dalhart.

[fol. 902] Q. How far is it from Tucumcari to Dalhart?

A. Ninety-three miles.

Q. Then you do consolidate trains at Dalhart in some cases?

A. We do our consolidating at Dalhart. If and when the Southern Pacific brings three trains into Tucumcari, then we can consolidate the three trains into two 3,500-ton trains at Tucumcari.

Q. Do you hold part of the tonnage then at Tucumcari in order to make that consolidation?

A. No, we cannot do that, because there would be nothing gained in making one 3,500-ton train and then running the balance of the traffic in a train of probably 1,000 tons. So therefore, we include the two trains at different

tonnages into Tucumcari for the main line at 2,000 tons per each train.

Q. What is the load limit, the practical limit of the train from Dalhart eastward?

A. That tonnage starts out of Dalhart at 4,500 tons and gets up to as high as 5,800 tons between Dalhart and Pratt, Kansas.

Q. What length of train of loaded cars of perishables has the 4,500-ton limit loading?

A. The 4,500-ton limit would load between ninety and one hundred cars. It would depend altogether on the [fol. 903] traffic in the train. It is not always a solid train of refrigerator cars or heavier commodities. Therefore, we handle out of Dalhart in our consolidated expedited train from 110 to 115 cars of fruit and box car freight.

Q. Do I understand you to say that if three Southern Pacific trains are brought over to Tucumcari and turned over to you that you can consolidate them to 3,500 tons per train for a movement eastward from Tucumcari?

A. Yes, we can do that.

Q. Does that often happen?

A. No, it does not, on account of the way the fruit reaches Tucumcari. It is not always advisable to hold the first train for the second train, on account of the fact, as I stated yesterday, that trains do not always operate on first schedule.

Q. In other words, the trains come into Tucumcari at intervals far enough apart so that you do not feel able to hold them, is that it?

A. That is true. We do not always feel able to do that on account of the fact it would delay the first block. But if the trains were so regulated across the block that the heavier trains could arrive at Tucumcari as the now single trains arrive, then those consolidations would be possible.

[fol. 904] Q. Does this consolidation at Tucumcari, when you are able to do it, or at Dalhart, result in any delay to the fruit as regards its arrival on schedule at Kansas City or points east?

A. No, on the contrary, we find that the consolidated train will make a better movement over the entire section of the railroad than the same amount of freight operated in two trains, for the reason that it reduces the number

of meeting points and the operating delays of the section, or the first section of the train.

Q. Does it reduce in any respect the amount of the terminal delays, the switching delays at the terminals?

A. Yes, very materially, for the reason it is operated on through-schedules, and reduces the units to be handled, it reduces the number of engines to be handled in round houses and the number of cabooses to be entrained and detrained, and as a general thing it is very much easier to operate a consolidated train from an operating standpoint.

Q. You spoke of entraining and detraining cabooses at terminals. Is that the changing of the caboose made at each freight division, freight subdivision terminal?

A. Not at each subdivision terminal, but at each division [fol. 905] terminal. We have some subdivision terminals which are not terminals for the through trains.

Q. Is it made at each terminal where the crew is changed?

A. It is. We change all our caboose at crew-change points.

Q. Does each crew have its own assigned caboose?

A. Yes.

Q. And the change is made because of this caboose assignment?

A. Yes, we very much prefer handling cabooses through that plan.

The Court: Locomotives change at the same points the cabooses do?

A. Not always, your Honor. The locomotives are often run through and for that reason there is a terminal detention to the train when you have to service the engine and move it out on the connecting train. When you have a solid train you have but one engine to service at the terminal. Where you have two sections of this train, you have two or three engines to service, so that by the time the third section has finally left the terminal it tends to lose time instead of making up time, as compared with the heavy train.

Mr. Mason: Do you desire to cross-examine now, Mr. [fol. 906] Strauss?

Mr. Strauss: No.

Mr. Mason: Will it be satisfactory to defer the entire cross examination, then?

Mr. Strouss: Yes, I would prefer to.

The Court: You may step aside, then. Cross examine later.

[fol. 907] C. R. Young was recalled to the stand and testified further as follows:

Cross-examination:

By Mr. Strouss:

Q. Mr. Young, who selected the particular divisions of your railroad that were used in making up your exhibit No. 30 that is entitled "Typical Examples of Through Freight Trains Handled"?

A. I did.

Q. What was the reason for taking the particular divisions that you did take?

A. We undertook to set up a picture that would give a fairly concise conception of all phases of the operation of the Illinois Central. You will notice that in some of those territories the grade was heavy and in other territories it was almost level.

Q. Now, in going over your train sheets, I notice that during this ten-day period you had eight trains with either a broken knuckle or pulled draw bar. All were over 60 cars and six were over 70 cars. I wonder if you can state whether that is true?

[fol. 908] A. I didn't examine the train sheets, Mr. Strouss, for that detail, but I suspect that in that period there would be as many broken knuckles and draw bars pulled out in trains of less than 70 cars as there was.

Q. Wait a minute. Not what you suspect. I would like to have you examine the train sheets and testify to what the train sheets actually showed and see whether my statement was correct or not.

Mr. Booth: We think that is not proper cross-examination. We didn't ask him about anything about accidents happening on the train. To ask the witness to go over a number of train sheets is going entirely outside the scope

of direct examination. There is a safety feature of this case which is a branch of our case, which, except in the most incidental manner, we haven't approached in this branch of the case and don't intend to approach. We submit it is not proper cross-examination.

The Court: I understand that this data you are asking about is contained in the books and records produced here by this witness?

Mr. Strouss: On the train sheets that were produced, yes, sir.

The Court: Overrule the objection.

Mr. Strouss: I would like to have Mr. Young check that [fol. 909] later.

The Witness: You can give me the dates and the trains that you selected.

Mr. Strouss: Yes.

The Witness: I will be very glad to do that.

The Court: Now, Mr. Strouss, if this is going to take some little time for the witness to check that, we might defer his making that examination until recess.

Mr. Strouss: Well, that is the last question I wanted to ask Mr. Young.

Mr. Booth: I doubt if he can make it this morning, or even this afternoon.

The Court: How long would it take, Mr. Young?

A. I think I can do that in thirty minutes, Your Honor.

Mr. Booth: Your Honor, we might want to ask him, with such assistance as we might furnish, to check all the train sheets. Counsel picks out some of the train sheets.

Mr. Strouss: My question covered the whole division for the ten-day period.

Mr. Mason: It is only the Illinois division.

Mr. Strouss: Yes. If you want to check, I would be glad for you to put that in.

Mr. Booth: It would be proper re-direct examination [fol. 910] when a witness is asked that question to ask him what he found about the other divisions.

The Court: We will cross that bridge when we come to it, gentlemen.

Mr. Booth: Suppose we leave it this way, that Mr. Young will make whatever check is necessary to answer the question, but if we desire to make an additional check we will recall him when that check is made.

The Court: You may do that. You may proceed.

Mr. Strouss: That is all.

The Court: Is it understood that Mr. Young will check this data and then you will use him as soon as an opportunity presents itself?

Mr. Strouss: Yes.

G. W. OAKLEY was recalled to the stand and testified farther as follows:

Mr. Booth: Mr. Oakley is called for cross-examination.

Cross-examination:

By Mr. Strouss:

Q. Mr. Oakley, referring to exhibit No. 54, the amounts shown in column C are the totals of accounts 201 to 462 of [fol. 911] the annual report, form A, and credits as shown on page 313, is it?

A. 313. It is. It is correct.

Q. The amounts shown in column D are the totals of accounts 371 to 420 inclusive?

A. That is correct.

Q. The reduction in miles of road operated shown on exhibit No. 56, was that due to abandonment of unprofitable branch lines?

A. You asked that question the other day and I said "Yes."

Mr. Strouss: That is all the questions.

Mr. Booth: No further questions. May Mr. Oakley be excused and be permitted to take his underlying exhibits with him?

Mr. Strouss: No objection.

The Court: There being no objection, Mr. Oakley may be excused, and he may take his records with him.

[fol. 912] F. W. GREEN was called as a witness in behalf of the defendant and, being first duly sworn, testified as follows:

Direct Examination.

By Mr. Mason:

Q. Where do you reside, Colonel?

A. St. Louis, Missouri.

Q. What is your position?

A. Chief operating officer for the trustees of the St. Louis Southwestern Railway Lines.

Q. You have quite a long experience in the railroad business, haven't you, Colonel?

A. Yes, sir, over forty years.

Q. Will you describe your experience from the start, including your educational qualifications prior to entering the railroad business?

A. Well, I was a high-school graduate, Rock Island High School, Illinois, in 1893. I entered the railroad service in 1893 as yard clerk, and I worked on construction in 1894 for a firm called Nogle, Hokum & Company, then in the fall of 1894 I went to work for the Chicago and Alton Railroad as trucker in the freight house. I worked nine months. I was promoted to yard clerk. The year after that I was [fol. 913] made operator-agent about two years. After that I was made yard master at Bridgeport yard, Chicago. Later on, summarizing very briefly, I went as a train dispatcher on the Alton road, as an extra dispatcher on the Fitchburg Railroad, Boston, Massachusetts, as train dispatcher on two divisions of the Missouri Pacific Railroad, superintendent on three divisions of the Missouri Pacific Railroad, train master, incidentally, on the Great Northern Railroad, Willmar division, Sioux City, Iowa, superintendent on the Missouri Pacific Railroad at Little Rock of the Arkansas division; later on the White River division, and then at Wynne, Arkansas, on the Memphis division; then from 1906 until 1916 I was—well, from 1906 to 1911 I was general superintendent of the Louisiana and Arkansas Railroad; 1911 to 1916, general manager, Louisiana and Arkansas Railroad; 1916 to May, 1917, assistant to the president of the St. Louis Southwestern Railroad; from May 5th, 1917, until March 13, 1919, I was in the military service nearly 19 months in France. I returned to the St. Louis Southwestern as assistant to the president on April 1, 1919; and on July 15, 1919, I was elected vice president in charge of operation and have continued in that capacity [fol. 914] for the corporation since, and since December 12, 1935, when our road went into bankruptcy under section 77-B, I have been chief operating officer for the trustees of the St. Louis Southwestern operating lines.

Q. In your military service, were you an officer in the railroad operating department? I may not state the division correctly.

A. I was commissioned in the Combat Engineers and served five months with the Third British Army in France in combat engineering service, after which I was detached from my regiment and sent to Brest in November, 1917, where I was appointed superintendent of army transport service and opened up the port of Brest, continuing in that capacity until July 1, 1918, when I was transferred to St. Nazaire branch, where I was superintendent of army transportation service until October 1, 1918. I was then promoted to the grade of lieutenant colonel in command of all the transportation corps troops there, where I continued until I was relieved on February 24, 1919.

Q. You have been with the St. Louis Southwestern in the executive capacities you have mentioned now for over twenty-one years, haven't you?

A. Yes, sir. I forgot to mention—you asked about an [fol. 915] educational qualification—I have a degree from the Missouri State University. I didn't put that in.

Q. In your experience with the St. Louis Southwestern and other railroads, I take it you have become rather closely familiar with railroad operations generally, and particularly as carried on by your own railroad?

A. Yes, sir.

Q. And you are the responsible operating officer of the Cotton Belt at the present time and have been for a good many years past?

A. Yes, sir.

Q. Have you seen the map which has been marked for identification exhibit No. 58?

A. That is the St. Louis Southwestern map?

Q. Yes.

A. Yes, sir.

Q. Will you say whether or not exhibit No. 58 for identification is a reasonably accurate outline of the lines of railroad of the St. Louis Southwestern system?

A. It is.

Q. And shows the territory and the states in which you operate?

A. It does.

[fol. 916] Q. And the principal points and stations on the line?

A. It does.

Q. And the heavy black line will be explained later in connection with another—

A. Yes, sir.

Mr. Mason: We offer the exhibit in evidence as No. 58.

Mr. Strouss: The same objection.

The Court: It may be admitted. Objection overruled.

(Thereupon the document referred to was received in evidence and marked "Defendant's Exhibit No. 58.")

Mr. Strouss: My objection goes also to all the oral testimony.

The Court: Yes.

Mr. Mason: I take it that the objection is that one expressed on the second day of the trial, that is, as to the relevancy and materiality. I take it you have no objection to the competency of the exhibit in view of the witness's qualifications and identification.

Mr. Strouss: Well, of this particular exhibit that would be true, yes.

Mr. Mason: That is what I mean.

[fol. 917] Mr. Strouss: But in order to keep the record clear as to my objection, I make the complete objection, recognizing that that one ground would not be good as to this particular exhibit.

Mr. Mason: Colonel, I take it that in your position you have to make frequent trips over all of the lines of the St. Louis Southwestern?

A. I do.

Q. You generally make those in your business car?

A. Ordinarily, although on several occasions where I have a short trip I go without a car.

Q. Do you always travel with the business car attached to a passenger train?

A. No, quite frequently it is attached to a freight train.

Q. Why do you use freight trains?

A. Because we don't handle very many passengers on our railroad, we are principally a freight railroad, and too much time is lost in waiting for a passenger train. If a freight train comes along, it becomes convenient to move off on the freight train. Also it gives an opportunity to ob-

serve what the freight train is doing while it is being moved over the railroad.

Q. As between the use of a passenger train and a freight [fol. 918] train for these inspection trips, which in your observation results in the better view of the railroad and a better view of its operations?

A. Well, I think that riding on a passenger train, one can get a fairly good view of the track and that feature of the railroad, but from the view of inspection of operations of terminals and the trains and the observance of rules by trainmen, I think it is better to travel on the freight trains, it gives a better idea.

Q. When you have your business car attached to the freight train, where is it placed?

A. Next behind the caboose usually.

Q. Have you ever placed it next behind the engine?

A. No, sir, never.

Q. Do you select trains of particular length to which to attach the business car?

A. No, when we get ready to go we take the first train.

Q. Do you ever attach your business car to a train exceeding 70 cars, exclusive of caboose?

A. Oh, yes, quite frequently.

Q. As frequently as with shorter trains?

A. Well, our moves on freight trains are usually up on the main line, because branch line movements are usually [fol. 919] on local trains, and the usual length of the train on the main line, I think the going average is 70 cars or more on the main line movements in the direction of heavy traffic particularly.

Q. Is it correct that your trips with your business car attached to the freight train on the main line will be more often with trains of more than 70 cars than with trains of less than 70 cars?

A. Yes, I think that is true.

Q. Are you familiar with the code of rules employed in your transportation department.

A. Yes, sir.

Q. Is that a regular book of rules?

A. Yes, sir, standard bound code of rules of the American Association of Railroads.

Q. Does your code of rules conform to the A.A.R. standard?

A. Yes, sir.

Q. Is the St. Louis Southwestern equipped with block signals in any part of the territory?

A. We have block signals between 11A Junction and Shreveport, Louisiana; we have electric automatic block signals that are now being installed on a 47-mile stretch between Illmo and Dexter Junction, which we expect to have completed about the middle of January of next year, [fol. 920] and we have a short stretch of block signals between Camden, Arkansas; and Herbert, Arkansas, about 3 miles. On the Illinois division, that is practically all block signals, there is 2 miles not block signals.

Q. Do you have any substantial extent of double track?

A. Well, on the Illinois division there is 83 miles of double track that is operated by the Missouri Pacific, that is, they are the operating company, and on the Illmo subdivision we have 16 miles of double track.

Q. Is the balance of the railroad single track?

A. The balance of the railroad is single track, yes.

Q. What is the standard weight of rail in the main line?

A. All the new rail we have laid in the last five or six years is 112 pounds.

Q. Do you use any heavier weight on grades or curves?

A. No, sir.

Q. Is the 112-pound rail replacing lighter weight rail?

A. Replaces 85-pound rail, yes.

Q. What is the standard of ballast?

A. Our standard of ballast, our rock ballast is 2500 cubic [fol. 921] yards of crushed rock per mile. Our washed gravel ballast is 2000 cubic yards of gravel per mile.

Q. Is the entire road ballasted with crushed rock or gravel up to the standard, that is, the main line?

A. All the main lines are ballasted with washed gravel except about 60 miles on the Illmo subdivision, which is crushed rock.

Q. Do you have any bridges as to which there are restrictions governing the weight of locomotives that may be used over them?

A. Not on the main lines.

Q. You have one crossing of the Mississippi River below St. Louis beside the crossing at St. Louis, do you not?

A. Yes, sir, that is at Illmo. That is a double track, very heavy bridge built in 1903, Cooper's E-65 cord system and E-70 floor system.

Q. Has that been maintained and brought up to date so as to carry locomotives of modern type and weight?

A. It can carry the heaviest locomotives made or any number of them coupled together.

Q. Now, with the crossing between East St. Louis and St. Louis, what bridge is used there?

[fol. 922] A. There is the Merchants bridge, which has a limitation of Cooper's E-43; there is the Eads bridge, which is owned by the Terminal Railroad Association, which has a Cooper's rating of E-38; there is the Municipal bridge owned by the City of St. Louis, which is capable of handling any locomotive, but the only railroads using it presently are the Pennsylvania, the Illinois Central, the Alton and Southern; the B. & O.

Q. Your principal freight terminal is at East St. Louis?

A. It is.

Q. And traffic for St. Louis is handled into the city by transfer engines across one of these two bridges other than the Municipal bridge?

A. Yes, sir, that is true.

Q. Is East St. Louis the point at which you interchange traffic destined for the state of Illinois and points and states east of Illinois?

A. It is.

Q. I take it, Colonel, that in your capacity as chief operating officer, you are familiar with the grades encountered at various points on your system?

A. Yes, sir.

Q. You know those grades of your own knowledge independent of any profiles?

A. Yes.

Q. Do you have any helper districts on the system.

A. Not in the strictly technical significance of the term. Our northbound tonnage trains out of Illinois has to go up against a five-tenths ascending grade about two miles, and they are shoved up that grade by the Illinois switch engine, but it is within yard limits and it is not strictly a helper.

Q. Do you have to adjust tonnage to grades at other points on the system?

A. Yes.

Q. Is it correct to say that five-tenths per cent is the maximum ruling grade encountered at any point on the main line?

A. Five-tenths is the maximum grade to be encountered. Between Pine Bluff and East St. Louis, actually it is five-tenths; between Pine Bluff and Illmo in either direction, three-tenths; between Illmo and East St. Louis south of Pine Bluff the grade uniformly is a maximum of one per cent, between Pine Bluff and Corsicana.

Q. Corsicana is one of the important western terminal points of the system, is it not?

A. It is our most important junction point in interchange [fol. 924] of traffic with the Southern Pacific.

Q. Are you familiar, Colonel, with the freight and passenger car equipment and the freight and passenger locomotives used by the Cotton Belt?

A. Yes, sir, I am.

Q. That is a necessary part of your knowledge in order to discharge your duties as chief operating officer, is it not?

A. That is true.

Q. Have you been furnished with a copy of defendant's exhibit No. 2, being the exhibit showing the chronology of freight cars?

A. Yes, sir.

Q. Will you say from your knowledge of the freight car equipment of the Cotton Belt whether the development of your equipment has proceeded along the same general lines as are depicted upon this exhibit?

A. I have studied this exhibit and find that in general these changes and developments from 1900 on up to 1940 in the design and capacity of freight equipment follow essentially the developments in the standards, changes in the standards of the American Association of Railroads. On the Cotton Belt railroad we have experienced this change, but not in exactly the same years. We are from [fol. 925] three to seven years behind the dates shown here on this exhibit No. 2.

Q. That is to say that you have gone to the 750 pound castiron wheel, for example, a little later than 1924?

A. On that particular item we went into it about 1926. The type B couplers we went into in 1919, the same year you did, but the castiron single plate wheel, which you went into in 1927, we didn't go into until 1935.

Q. Is the castiron single plate wheel now standard for all Cotton Belt boxcars?

A. I wouldn't say it was our standard, Mr. Mason, because on certain of the boxcars that we are now acquiring

in 1941, we are using some single wear steel wheels, and on 50 automobile cars we built in 1940 we are using single wear steel wheels in place of the cast iron single plate wheel.

Q. Does the Cotton Belt now use in revenue service any boxcars not having all steel or steel underframe construction?

A. No, we do not own any wooden underframe boxcars, they are all steel underframes.

Q. Have you been furnished with a copy of exhibit No. 4 showing the development of passenger cars?

[fol. 926] A. Yes, sir.

Q. Does the development of passenger car equipment of the Cotton Belt correspond generally to that shown upon Exhibit No. 4?

A. We bought in 1937 ten chair cars of the single unit type very similar to the chair car you show in 1937 on this exhibit. That is the only passenger equipment we have purchased in the last few years. The rest of our equipment in passenger service conforms quite generally to the equipment shown here in your line for the years 1923 and 1927.

[fol. 927] Mr. Mason:

Q. Do you have any wooden passenger coaches in service, that is, in main line service?

A. No, the only wooden passenger coaches we have are used in work service, in bridge building, etc. We do not use any wooden underframe passenger coaches. We don't own any, except that which is in work service.

Q. These are cars that are used in work service and moved from point to point in work trains or at the rear-end of freight trains, aren't they?

A. Yes, usually moved in local trains.

Q. Are not used in revenue service?

A. No, never.

Q. Does the Cotton Belt handle Pullman cars?

A. Yes.

Q. Are those the standard type of Pullman cars commonly used by the American railroads?

A. They are all standard steel cars, of standard Pullman type that came out about ten or fifteen years ago. They are not the stream-lined latest Pullman type.

Q. Does the Company handle refrigerator cars of PFE ownership?

A. Yes.

Q. As many as possible, I suppose?

A. Yes sir, a good many thousand in the course of a [fol. 928] year.

Q. You handle refrigerator cars of other ownership as well?

A. We handle a few, but the great bulk of the refrigerator traffic we handle comes in PFE cars.

Q. Now, referring to Exhibit No. 5, and perhaps we should also consider Exhibit No. 6 as well, those being the exhibits showing the types of freight and passenger power on the Southern Pacific, does your Company have locomotives corresponding to those shown on those two exhibits? I mean as to general physical wheel arrangement and particularly as to tractive effort?

A. We have locomotives of the 2-8-0 Consolidation type, locomotives of the 4-6-0 ten-wheel type, the 4-8-2 Mountain type and the 4-8-4 Golden State, which are used regularly. We also have a few of the Mogul type engines which are used on branch line service 2-6-0's.

Q. What type of locomotive is principally used in your main line service?

A. The 4-8-4 Golden State type and the Consolidation, 2-6-0 type and the Mountain type 4-8-2?

Q. Consolidation 2-8-0?

A. 2-8-0.

Q. Does the tractive effort of those several types owned [fol. 929] by the Cotton Belt correspond to the types that are shown here or are they larger or smaller?

A. The Southern Pacific Mountain type shows a tractive effort of 57,510 pounds and our Mountain type shows 44,079 pounds. Ours is a lighter engine. On the Golden State type the Southern Pacific tractive power is 62,200 pounds on that exhibit, and our tractive power is 61,560 pounds. We are slightly lighter than your Golden State type.

Q. What about the Consolidation? I think that is the other type you mentioned?

A. The Southern Pacific Consolidation is of 43,300 pounds and our Consolidation is quite a little bit heavier, 52,254 pounds.

Q. Are your locomotives equipped with superheaters?

A. Yes, sir.

Q. With feed water heaters in some instances?

A. Superheaters, feed water heaters, all our modern power is equipped with feed water heaters.

Q. Has the later type braking devices?

A. The latest Westinghouse type of braking equipment.

Q. Do any of these larger locomotives have double air compressors on them?

A. The Consolidation types do. All of the Consolidation [fol. 930] type that are used on this fast service I am speaking of.

Q. You mean fast freight service?

A. Fast freight service, equipped with disc cast steel wheels, and others have lubricators alemite greasing arrangements. All our modern power has alemite greasing equipment.

Q. That permits the grease to be forced to the bearings under high pressure?

A. That is right; and the 4-8-4 locomotives, five of them are equipped with roller bearings on the engine and trailer trucks and driving wheels, and by next September we will have ten more equipped with roller bearings throughout.

Q. Does the Cotton Belt maintain or participate in schedules for the movement of freight?

A. It does.

Q. In one or both directions?

A. In both directions.

Q. I take it that you use the terms west bound and east bound to refer to the movements?

A. Yes.

Q. West bound away from St. Louis?

A. Right.

Q. Do you participate in schedules for the handling of perishable traffic?

[fol. 931] A. We do.

Q. What is the principal at which perishable traffic is originated or received on the Cotton Belt?

A. East bound perishable traffic which we receive from the Southern Pacific at Corsicana originates in California, from the Imperial Valley and in the Salt River Valley of Arizona. That which we receive from the Southern Pacific

at Shreveport, Louisiana, originates principally in the Rio Grande Valley.

Q. That is the South Texas production?

A. That is the South Texas production, yes sir.

Q. How do you handle that?

A. On guaranteed schedules.

Q. On guaranteed schedules?

A. Yes, sir.

Q. Are those a portion of the through schedules from a concentration points to ultimate destination?

A. Ultimate destination.

Q. As to that traffic the Cotton Belt serves largely as a bridge or overhead carrier?

A. That is quite true.

Q. Do you make connections at East St. Louis with lines going to Chicago and to eastern points?

A. With the exception of the Alton and Southern and [fol. 932] the Illinois Central, all of the deliveries of east bound traffic to the eastern lines is effected through the terminal railroad at St. Louis, or the Alton & Southern, principally the terminal.

Q. What point?

A. At East St. Louis.

Q. Speaking of the movement from Corsicana to East St. Louis, what is the time allowance for the traffic originating in California or Southern Arizona and apportioned to the Cotton Belt?

A. Well, we have three schedules. The first one known as the Colton block.

Q. That refers to traffic concentrated at Colton, California, does it?

A. That is the Colton concentration, yes sir. That must arrive at East St. Louis at 9:30 P.M. the sixth evening and make the 2:00 A.M. connections with the eastern trains and the Chicago trains. The traffic originating in the Imperial Valley and concentrating at Brawley must arrive at East St. Louis at 9:00 P.M. on the fifth evening. Traffic which originates at Phoenix, which we call the Salt River Valley block, must arrive at East St. Louis at 9:00 or 9:30 P.M. the fourth evening.

Q. Now, there is a certain amount of traffic, as I understand it, which originates at Yuma. Do you participate in [fol. 933] moving any of that?

A. Not very much; that mostly moves over the Rock Island. We handle some, not a great deal.

Q. Does that move on the Imperial Valley schedule?

A. That moves usually on the Imperial Valley schedule or sometimes it moves on the freight schedules.

The Court: We will take a brief recess at this time.

(After recess.)

The Court: You may proceed with your direct examination.

Mr. Mason:

Q. Colonel, I think you said you received this refrigerator traffic at Corsicana from the Southern Pacific?

A. That is right.

Q. Is there a definite scheduled hour of the day at which the deliveries are made to the Cotton Belt at Corsicana?

A. There is an agreed schedule as between the participating lines and these guaranteed new schedules, and the Cotton block traffic, for instance, must be delivered by the Southern Pacific to us at Corsicana at 9:00 A.M. The [fol. 934] Imperial Valley traffic not later than 2:00 P.M., the Salt River Valley traffic not later than 3:00 P.M. when it is delayed at Phoenix account precooling, which it frequently is.

Q. Then what time do you use up in making the run from Corsicana to East St. Louis?

A. In the last instance mentioned, 30 hours for 752 miles.

Q. That gives you an average speed of—

A. A little over 25 miles per hour.

Q. Including all terminal delays?

A. Yes, sir.

Q. And the delay, if any, of assembling the cars into the train at Corsicana?

A. Yes, sir.

Q. Does that 30 hours include the time of breaking up the train at East St. Louis for the delivery to the connections?

A. No, sir, that only includes the arrival time at East St. Louis.

Q. You heard Mr. Fertig's testimony, did you not, as to the schedules from California and Arizona points to Chicago?

A. Yes, sir.

Q. Are the schedules of which you speak in which the Cotton Belt participates, the same as those in which the [fol. 935] Rock Island participates?

A. They are the same schedules, yes, sir.

Q. But over a different route?

A. Over a different route.

Q. What is that route?

A. The Rock Island make their schedule, make this schedule which is common to all the competing lines over what is known as the Golden State route. The schedule in which we participate is via the Southern Pacific via El Paso to Corsicana and the Cotton Belt from Corsicana to East St. Louis, and then the various connections east to the Atlantic Seaboard or whatever the destination of the traffic may be.

Q. Chicago taken as a representative point is the point to where the 138 hours or 39 hours and 30 minutes apply?

A. The 136-hour basic schedule rule, yes.

Q. It 136 hours basic to Chicago now?

A. Yes.

Q. Does the 16-hour run-off apply?

A. Yes, sir.

Q. In connection with your Company?

A. Yes, sir.

Q. How much time do you take to run off out of those 16 or 19 hours mentioned as being agreed upon?

[fol. 936] A. We run off one-third.

Q. You run off as much as five hours and twenty minutes?

A. When necessary, yes sir.

Q. Is there any one railroad out of East St. Louis that receives the bulk of the perishable traffic from you?

A. Yes, I should say the Wabash, the Nickel Plate and the Pennsylvania. They balance back and forth. One leads the procession one month and the other the next, but they are the three principal carriers, at least, of the perishables.

Q. Does that include traffic destined to Chicago as well as that destined to eastern seaboard points?

A. It is practically all traffic going to eastern seaboard points. The Chicago traffic I think moves principally over the Golden State route.

Q. You don't participate much on Chicago traffic?

A. Not much.

Q. How does the mileage of the route that you have described in which your line is—of which your line is a part—as between Arizona and California points of origin and St. Louis, compare with the mileage over what you have described as the Golden State route?

A. Traffic from El Paso to East St. Louis via Corsicana [fol. 937] has to move 404 miles farther to reach East St. Louis than if the same traffic should leave El Paso and move through Tucumcari and the Golden State route.

Q. That would be the Southern Pacific to Tucumcari, thence Rock Island via Kansas City to St. Louis?

A. That is right, yes sir.

Q. Is there another competing route from El Paso across Texas?

A. The Texas Pacific and Missouri Pacific, yes sir.

Q. Is that operated via Texarkana?

A. Yes, sir.

Q. What are some of the significant junctions on the routes, or train points?

A. Our train point of interchange with the Texas & Pacific is at Big Sandy, Texas.

Q. I mean referring to the Texas Pacific and the Missouri Pacific routes, through what cities in North Texas and Arkansas do they run?

A. The Texas Pacific runs through Ft. Worth and Dallas and Texarkana; the Missouri Pacific through Little Rock, Poplar Bluff, Illmo, East St. Louis.

Q. How does the mileage over that route from terminal [fol. 938] points compare with the mileage via the Corsicana route?

A. They are 207 miles shorter than we are.

Q. Are you able to operate in connection with the Southern Pacific so as to make deliveries at the same time as these other shorter routes that you have described?

A. Yes sir, we do.

Q. Do you operate these east bound trains containing perishables in lengths of more than seventy cars over any part of the Cotton Belt?

A. Yes sir, I think that as a rule, rather than the exception, we do operate over seventy cars.

Q. Over what part of the line?

A. From Pine Bluff to East St. Louis. That is, three freight divisions where the grade is five tenths of one percent or less.

Q. Do you operate any units of more than seventy cars west of Pine Bluff?

A. It is the rule, rather than the exception, on the west bound trains to handle more than seventy cars. When the empty refrigerators are moving, we sometimes move as many as 90, 95 and 100 cars, empty refrigerators.

Q. But eastward, do you move the traffic in units of more than seventy cars loaded?

A. Occasionally, but the grades sometimes require the [fol. 939] number of cars to be a little less than that because of the ruling grade.

Q. The tractive effort of your locomotives used in those districts between Corsicana and Texarkana do not permit of the handling of more than seventy loads, is that correct?

A. Well, it runs between sixty and seventy loads, depending upon the weight of the car.

Q. Now, is there any reason from the standpoint of the schedule to be maintained why more than seventy cars could not be handled between Corsicana and Texarkana if larger power were available?

A. If larger power were available and the schedule, the guaranteed schedule would permit the heavier train to be handled, there would be no reason why it could not be handled.

Q. When you speak of the schedule permitting, you mean permitting the whole tonnage at Corsicana to be built up into longer trains?

A. No, this is what I had in mind; if you have thirty hours to get from Corsicana to East St. Louis, that means that the tractive power of the locomotive is the ruling factor in the number of cars or the number of tons that the locomotive can handle in that given time. If you had an hour or two more, then you could handle 4, 5, 8 or 10 more cars. [fol. 940] All of those things have to be balanced or taken into consideration in determining what the length of the train will be.

Q. Now, in the territory north of Pine Bluff do you have sufficient tonnage to permit you to handle more than seventy cars as a regular thing?

A. Yes, quite often, north of Pine Bluff we handle more than seventy cars.

Q. Is there any grade there which affords a limiting factor?

A. No, sir.

Q. What is the ratio of on-time deliveries to the total number of trains of perishables units handled by the St. Louis & Southwestern, according to your best knowledge?

A. I haven't got the figures with me, but I am sure it runs well over 90% of the total cars we handle. Under the schedule we have to pay claims if we fail to handle the schedules and naturally we are very careful to make them.

Q. I think we referred briefly to west bound schedules. Do you have schedules for the movement of traffic west bound?

A. Yes, sir.

Q. Do they contemplate the delivery at Pacific Coast points of traffic handled by your Line to Corsicana?

[fol. 941] A. Yes sir, they do.

Q. You heard the testimony of Mr. Fertig as to these west bound schedules, yesterday?

A. No sir, I didn't hear that yesterday.

Q. Well, what is the west bound schedule via your line of traffic loaded, for example, at Chicago or St. Louis?

A. Traffic moving from St. Louis is due to be delivered at Los Angeles at 4:00 on the morning of the sixth day from East St. Louis. That is on what we call the Los Angeles special train, a train known as the Motor Special which handles automobile parts, traffic of that sort. That moves on a faster schedule. We handle it from East St. Louis to Corsicana on a 28-hour schedule.

Q. Does that run in units of more than seventy or less than seventy cars?

A. North of Pine Bluff it moves in units frequently in excess of seventy cars.

Q. Do you have any difficulty in maintaining that 28-hour schedule?

A. Well, our difficulty primarily is in getting the business from the connections at East St. Louis, getting a train out on time. It is due to leave at 4:30 P. M. and frequently does not get out until 5:30 or 6:00 and we do have [fol. 942] difficulty in making that schedule.

Q. The difficulty is because of the late deliveries from connections?

A. Because of the late deliveries from connections, yes sir.

Q. Do you have any difficulty in making the route?

A. No, if we can get out of St. Louis anywhere near on time we can get to Corsicana on time.

Q. Isn't a schedule which contemplates only 28 hours for 752 miles rather a bad schedule for the handling of freight?

A. Yes, it is bad.

Q. Exhibit 28 indicates that you have quite a number of branch or auxiliary lines. These lines, for example, in northeastern Arkansas, and extending to Cairo, Illinois, are those branch lines?

A. Those are all branch lines, yes sir.

Q. The line from Lusk to Tyler, Texas, is that a branch?

A. Yes.

Q. Then the three certain just easterly of Pine Bluff, are they branch lines or main lines?

A. Well, the line leading into Memphis, we count as a main line. We use 69 miles from — into Memphis. [fol. 943] We count that as a main line.

Q. And your line from Cairo?

A. No sir, that is a branch.

Q. From Ft. Worth west to the junction at Texarkana, some of that counts as a main line?

A. Yes sir, that is a main line.

Q. From Shreveport north into Arkansas?

A. That is a main line.

A. Does the volume of traffic and the length of the train in which it is operated on these auxiliary lines correspond to the train lengths on the main lines?

A. No, sir.

Q. You have a good many short trains there, do you?

A. Because there is no traffic to move on them. If we had the traffic to move we could move longer trains.

Q. What factors in general determine the number of cars in freight trains that you operate on your main or branch lines?

A. The competitive schedule which must be met under these guarantees, the amount of traffic which has to be moved, the length of time available for moving them, sometimes the temperature conditions, the character and kind

of motive power available, the hour of the day which the [fol. 944] train has to be run—all of those things have more or less influence in determining the length of the train which can be run if traffic is available for it.

Q. Do you have any limitations on train lengths because of the limited siding capacity?

A. No, sir.

Q. You speak of the necessity of making schedules. Does that mean that you cannot hold the cars at terminals in order to build up trains because of the necessity of departing?

Mr. Strauss: If the court please, I do not like to make an objection on leading questions, but—

Mr. Mason: I agree with counsel, that is going too far.

The Court: Yes, objection sustained.

Mr. Mason: I will withdraw the question.

Q. Will you state whether or not you hold the traffic at terminals in order to build trains?

A. No, we don't. We have these guaranteed schedules to make and we must make them, so we run the trains on what traffic there is to run them with.

Q. I think you referred in your testimony to the handling of motor parts and automobiles and perishable traffic. Do you handle any other types of traffic?

[fol. 945] A. We run a solid merchandise train out of St. Louis every night, called the Blue Streak. It handles nothing but merchandise. Usually we handle it with a passenger engine.

Q. What kind of business is handled in that train? Is that carload or less than carload lots?

A. Nothing but merchandise. It is LCL traffic.

Q. Less than carload lot traffic?

A. Less than carload lot traffic.

Q. Does that train operate in connection with motor carriers?

A. Yes, our Company owns, wholly owns a subsidiary called the Southwestern Transportation Co., and at key points merchandise is sent out by the Blue Streak and is then fanned out to nearby destinations by this truck line.

Q. How do you gather the traffic at St. Louis?

A. We move it first from the connecting line. The bulk of it comes from connecting lines east. The traffic com-

ing from St. Louis proper is assembled by the Columbia Terminals Co. and then delivered by them to the freight house where our source is and loaded into the proper cars.

Q. How far south or westward from St. Louis does the Blue Streak operate?

[fol. 946] A. The Blue Streak operates 404 miles from St. Louis to Pine Bluff as a freight merchandise train, but will handle anywhere from 35 to 51 or 52 cars. At Pine Bluff; out of that merchandise and merchandise which comes in another train from Memphis and points north of Pine Bluff, two trains are made up, one going to Shreveport which we call 843 and the other one going to Dallas and Ft. Worth, which we call 43. Merchandise leaving St. Louis Monday night is delivered at Dallas at 10:00 P. M. Tuesday night, at Ft. Worth about 11:00 P. M. Tuesday night and at Shreveport at about 2:45 or 3:00 P. M. Tuesday afternoon.

Q. What does the Blue Streak make arrival at Pine Bluff?

A. It is due to arrive there at 6:30 in the morning. It usually gets there, because of late departure from St. Louis, it usually gets there about 7:45 to 8:50.

Q. You speak of handling this train as far as Pine Bluff with between 35 and 50 cars, more or less. Is there any particular reason, and if so, will you state what it is, why the train does not exceed fifty cars?

A. Because that is all the business there is.

Q. Does the operating department of the Company put [fol. 947] any limit upon the number of cars which may be handled in that train?

A. No, sir.

Q. Colonel, have you ever had any rule on the Cotton Belt as to the number of cars which would or might be handled in a freight train?

A. We have never had a rule. There have been occasions when the Superintendent has put out instructions. The last one I recall was in 1921 or 1922.

Q. What was the reason for the rule, if you remember?

A. They have three passing tracks on the Ilmo subdivision which would only hold eighty-five cars and a passenger train, and the Superintendent issued instructions that south bound would be limited to 85 cars at certain hours of the day where they would meet north bound trains.

at these particular sidings. But when the sidings were extended, that was discontinued.

Q. Do you have any such rule nowadays?

A. No, sir.

Q. Are you familiar, Colonel, with the statement bearing the title, "St. Louis Southwestern Railway Lines, Berryman Henwood, Trustee, Typical Examples of Freight Trains Handled Between Certain Terminals, April 12, 21, [fol. 948] Inclusive, 1939?"

A. Yes, sir.

Mr. Mason: May we have the statement marked?

The Clerk: Defendant's Exhibit 74 for identification.

Mr. Mason:

Q. Did you prepare or supervise the preparation of this exhibit, Colonel?

A. I personally prepared this one.

Q. From what sources?

A. From the train sheets.

Q. Do you have the train sheets from which this was prepared present in the court room?

A. Yes, sir, they are here.

Q. Are they available for the examination of opposing counsel?

A. Yes, sir.

Q. Is all of the information shown hereon other than that relating to the ruling grade taken directly from the train sheets?

A. It is, except the computation down in the box at the bottom. Those are computations which are based upon the information.

Q. The computations from the face of the exhibit?

A. Yes, sir.

Q. As to ruling grade, are those ruling grades matters within your own knowledge?

[fol. 949] A. Yes, sir.

Q. Are the ruling grades here shown true and correct?

A. They are.

Q. Do you have the engineering profiles of this portion of the line available here?

A. I have that one copy. I have got my own office copy of the profile if you want to see it.

Q. Will that be available also for the examination of counsel if needed?

A. Yes, sir.

Q. Has the exhibit been checked against the underlying sources?

A. It has.

Q. Did you participate in the check?

A. I personally checked it.

Q. Will you state whether or not the exhibit correctly reproduces the information contained in the original sources?

A. Yes sir, I am sure it does.

Q. The exhibit refers to a period of ten days, April 12 to 21, inclusive. Who selected that period?

A. Well, the defendant stated that they wanted a typical period of ten days in the year 1938.

Q. 1938 or 1939?

[fol. 950] A. 1939. And so the year was selected by the defendant. I then had a statement worked up by months, showing the ton-miles handled each month during the year 1939.

Q. Was that made up from the Form OS-A reports?

A. Yes sir, that was made up from the OS-A reports and for the northern division. That is the division which comprises from Ping Bluff to East St. Louis. The gross ton-miles average for the whole year 320,738—

Q. The figures, then, that you express are really millions?

A. That is millions. Three hundred and twenty million and some odd. Then I took the month which came nearest to that and the nearest month was the month of April, which had 324,000,000, and that was the way the month of April was selected.

Q. Now, apart from your reference to the Form OS-A reports and the computations you have referred to, will you say whether or not the month of April is reasonably representative and typical of the average of the year?

A. The month of April is the most representative month in the whole year. The volume of traffic is about an average for the whole year. The operating conditions are about the average for the whole year and that is the reason [fol. 951] the month of April was selected.

Q. Does the use of the month of April avoid either the peak or the slack of business?

A. It does.

Mr. Mason: Have you any questions, Mr. Strouss?

Mr. Strouss: Just as a matter of information, Colonel, I see that Jonesboro, Arkansas, is one of the points. Is that a division terminal between Illmo and Pine Bluff not shown on the exhibit?

A. The map does not show it, but it is a division terminal, 142 miles north of Pine Bluff and 131 miles south of Illmo.

The Court:

Q. Colonel, do I understand this particular exhibit embodies only the trains operated between Pine Bluff and East St. Louis?

A. This exhibit here?

Q. Yes.

A. Yes, sir. This exhibit does not include local trains or work trains or short trains, short turn-around trains. It includes only the through freight trains between Pine Bluff and East St. Louis for the period here covered.

• Mr. Booth:

Q. Those local trains, however, are shown on the train sheets?

A. Yes, sir, all trains operated are shown on the train [fol. 952] sheets.

Mr. Mason: Is there any point on the map, Exhibit 58, where a branch line leaves the main line, which will indicate the location of Jonesboro?

A. The short branch, first north branch line running into Memphis is the Blytheville branch, running from Paragould through Blytheville. At its junction with its main line is a point called Paragould. Twenty-one miles south of Paragould is Jonesboro.

Mr. Strouss: We make the same objections.

Mr. Mason: I offer the statement in evidence as No. 74.

Mr. Strouss: The same objections.

The Court: The same ruling. Objection overruled.

(Thereupon the document referred to was received in evidence and marked, "Defendant's Exhibit 74.")

Mr. Mason: In handing over that exhibit, we also tender a train sheet for the examination of opposing counsel, and I will ask if you wish the profile as well?

Mr. Strouss: No, I do not care for that.

Mr. Mason: You have already examined, I think, the form OS-A reports?

[fol. 953] Mr. Strouss: Yes, I have.

Mr. Mason:

Q. Colonel, do you have centralized traffic control in operation on any part of the Cotton Belt?

A. It is on a part of our operative mileage, but the Missouri Pacific is operating it.

Q. That is the joint trackage between East St. Louis and Elmo?

A. That is the joint trackage between East St. Louis and Elmo. They have central traffic control.

Q. Your trains, of course, use it?

A. Yes, sir.

Q. Do you use electric locomotives or diesel locomotives anywhere?

A. No diesel, no electrics.

Mr. Mason: That is all at this time, Mr. Strouss. Do you wish to cross-examine now or defer your cross-examination?

Mr. Strouss: No, I will wait until we have had a chance to examine the exhibits.

The Court: You may step aside, then, subject to a later cross-examination.

(Witness withdrawn.)

[fol. 954] WILLIAM A. KRAEMER called as a witness on behalf of the defendant, and having been first duly sworn, was examined and testified as follows:

—Direct examination.

By Mr. Mason:

Q. Will you please state your residence and employment, Mr. Kraemer?

Mr. Strouss: What is the gentleman's name?

Mr. Mason: Yes.

Q. Yes, your name, residence and employment?

A. William A. Kraemer.

The Court: How do you spell it?

A. K-R-A-E-M-E-R, residence Chicago, Illinois, employed as Assistant General Manager of the eastern district of the Chicago Northwestern Railroad Co.

Mr. Mason:

Q. Will you state your experience in railroad service, please, Mr. Kraemer?

A. I started in July, 1903 to 1909 as telegraph operator and agent at various stations.

Q. With the Northwestern?

A. With the Northwestern Railroad. From 1909 to 1919 as train dispatcher and chief train dispatcher of the Wisconsin of the Northwestern Railroad. From 1919 to 1925 [fol. 935] as train master of the Northwestern Railroad. From 1925 to 1935 as Assistant Superintendent of the Northwestern Railroad. From 1935 to 1938 as Superintendent; from 1938 to April of this year as Assistant General Superintendent; and since April 1st of this year as Assistant General Manager of the Eastern District.

Q. Has your experience as a division officer and as a general officer of the Northwestern System included experience over a large part of the system?

A. It did.

Q. Have you seen Exhibit No. 62 for identification heretofore presented in connection with the testimony of Mr. Snell?

A. I have, yes sir.

Q. Will you state whether that exhibit is a reasonably accurate outline map of the territory served by the Northwestern and the location of the lines of the Chicago & Northwestern Railway Co.?

A. It is.

Q. It does not included the affiliated Company, the Chicago, St. Paul & Minneapolis & Omaha, does it?

A. It does not.

Q. Does that Company operate in certain of the territory shown on this exhibit?

[fol. 956] A. No, it does not.

Q. It does not operate in Minnesota, Iowa and South Dakota?

A. It operates in the territory, but not on any of the lines shown on the exhibit.

Q. Your testimony relates entirely to the Chicago and Northwestern, so-called?

A. That is correct.

Mr. Mason: We offer the map in evidence as Defendant's Exhibit No. 62.

Mr. Strauss: The same objection.

The Court: Objection overruled. It may be admitted as Defendant's Exhibit 62 in evidence.

(Thereupon the document referred to was received in evidence and marked "Defendant's Exhibit 62.")

Mr. Mason:

Q. Now, as Assistant General Manager over what portion of the system does your jurisdiction extend at the present time?

A. All of the lines in the state of Michigan, Wisconsin, Illinois, Iowa, and the eastern part of Minnesota.

Q. Does it include the lines as far west as Council Bluffs, Iowa?

A. It does.

Q. And the lines from Chicago westward to the central part of Minnesota?

[fol. 957] A. That is correct.

Q. And all of the lines east of the Mississippi River?

A. In the state of Iowa, yes, not in Minnesota.

Q. No, I say all of the lines east of the Mississippi River, not the Missouri.

A. Yes.

Q. That would include the states of Illinois, Wisconsin and Michigan?

A. Correct.

The Court: Mr. Kraemer, referring to the map, exhibit 62, do I understand that all the lines shown on this exhibit are operated by the Chicago Northwestern Railway?

A. That is correct.

Q. And it is merely the lines designated with the heavy line, that is, what you indicate as a typical freight train

exhibit—but all of the lines shown here on this exhibit are operated by your railroad.

A. That is correct.

Mr. Mason: This map shows branch lines as well as main lines, does it not?

A. Yes sir, it does.

Q. Which is your principal east and west main line?

[fol. 958] A. From Chicago to Council Bluffs, Iowa.

Q. Do you have occasion in the course of your duties, Mr. Kraemer, to make trips over the system or any part of it?

A. I do.

Q. Particularly over the lines subject to your jurisdiction, I take it?

A. Yes.

Q. And do you make those trips in a business as well as on a passenger train?

A. Both, yes sir.

Q. Do you ever attach that business car to a freight train, as well as to passenger trains?

A. Yes.

Q. When you travel with the business car on freight trains, where do you have it placed on the train?

A. On the rear of the train, behind the caboose.

Q. Do you make any selection of trains on which the car is to be placed with regard to the number of cars in the train?

A. No.

Q. Do you ever ride in your business car on the rear of trains of more than seventy cars?

A. Yes, sir.

Q. Does the Northwestern have a book of rules for the [fol. 959] guidance of the employees in the transportation department?

A. They do.

Q. Is that a regular code made up into a book?

A. Yes, sir.

Q. And are you familiar with the standard code of rules of the Association of American Railroads?

A. Yes, sir.

Q. Does the Northwestern code bear any resemblance to the standard code?

A. The Northwestern uses practically the entire standard code.

Q. Is any part of the main line of the Northwestern, and in particular in your territory, equipped with block signals?

A. Yes, sir.

Q. To what extent are the main lines equipped with block signals?

A. We have 899 miles of automatic block signals on the railroad; all of which is on the eastern district, except eleven miles in the western district.

Q. Do you have any portion of the main line equipped with automatic train control?

A. Yes, we have the entire district from Chicago to Council Bluffs, Iowa.

Q. Any portion of your line north toward Milwaukee is [fol. 960] also so equipped?

A. No, automatic signals.

Q. Does any part of the main line consist of double track?

A. Yes, we have 963 miles of double track. Practically all of it is in the eastern district, except about four miles in the western district.

Q. Your line from Chicago to Council Bluffs, is that single or double track?

A. Double track.

Q. And your line from Chicago to Milwaukee, is that double track?

A. Double track.

Q. Does the double track extend beyond Milwaukee toward the Twin Cities?

A. Yes, it does to Clyman Junction.

Q. Do you have more than one main line between Chicago and the twin cities?

A. Yes, we have two sections, one main line by the way of Madison, Wisconsin, and the other by the way of Clyman Junction, Wisconsin.

Q. Is the Madison line double track in any part?

A. It is all double track with the exception of fourteen miles between Jamesville and Evansville, Wisconsin.

Q. Your Company operates a considerable suburban service [fol. 961] in and around Chicago, does it not?

A. Yes, a great deal.

Q. That is entirely passenger train service, of course.

A. Yes, sir.

[fol. 962] Q. In your position as assistant general manager, Mr. Kraemer, are you familiar with the extent of the

helper service, if any, performed in connection with freight train operation?

A. Yes; we have very little helper service in the eastern district, we have one case between St. Francis and Butler, Wisconsin, which is the Milwaukee outer belt, where we have a one per cent grade up West Allis Hill, where we have helper service westbound, and then coming east out of Waukegan, Illinois, we are right at the foot of a grade, and the yard engines shove trains out of the yard within yard limits. That is all the helper service we maintain in that territory.

Q. Do you, Mr. Keaemer, in your capacity as assistant general manager become familiar with the ruling grades upon that part of the system subject to your jurisdiction?

A. Yes, sir.

Q. What sort of territory or territories does the Northwestern serve? I mean, are they mountainous or lumbering regions, or agricultural, or industrial, or what?

A. Mostly agricultural and industrial, and some mining in the Lake Superior region, during the ore season from about April 15 to November 15, we handle a considerable [fol. 963] volume of ore to the Ashland dock on Lake Superior and to the Escanaba dock on Lake Michigan.

Q. What sort of region, generally, is Wisconsin? Is that industrial or agricultural?

A. Mostly agricultural.

Q. And northern Illinois?

A. Mostly agricultural, and some industrial, especially along the lake shore at Waukegan, Kenosha, Racine, and Milwaukee, they are industrial towns.

Q. Do you serve any coal producing areas?

A. Yes, we do down in the southern Illinois territory, the towns called Benld and DeCamp.

Q. Your line across Iowa, what sort of area is that?

A. Mostly agricultural.

The Court: We will take our noon recess. We will be at recess until 2 o'clock.

(Thereupon the court stood at recess until 2 o'clock P. M., December 5, 1940.)

[fol. 964]

2 P.M., December 5, 1940.

All parties being present as heretofore noted, proceedings were resumed as follows:

The Court: You may proceed with your direct examination of Mr. Kraemer.

The witness, William A. Kraemer, was recalled to the stand and testified further as follows:

Mr. Mason: Mr. Kraemer, does the Northwestern handle a considerable volume of traffic originated by other carriers and interchanged at junction points?

A. They do.

Q. Will you indicate, with reference to exhibit No. 62, some of the more important junctions at which traffic is received from connecting lines or delivered to connecting lines?

A. At Council Bluffs, Iowa, we interchange a considerable volume of traffic in both directions with the Union Pacific and other western railroads, principally the Burlington and the Missouri Pacific. At Des Moines, Iowa, we interchange with the Rock Island and the Great Western, and at Proviso, of course, we interchange with all the eastern and southern lines radiating out of Chicago principally through belt lines. At Milwaukee we interchange [fol. 965] with the Milwaukee Railroad. Those are our principal interchange points. Of course, we have many others.

Q. Where does traffic from the north Pacific Coast, handled into the Twin Cities, reach the lines of the Northwestern, generally speaking?

A. At Wyeville, Wisconsin.

Q. Is Wyeville a point of connection with your railroad, the C. St. P. M. & O.?

A. It is.

Q. Now, is Proviso the interchange point at Chicago or for the Chicago district?

A. It is.

Q. Just what is Proviso?

A. Proviso is Northwestern's large freight terminal into which all of the freight trains from the north, northwest, and west arrive, and from which traffic destined to eastern lines is delivered to the connecting Belt lines, and also all traffic originating from the south and east routed via the Northwestern Railroad is delivered into Proviso yard by

transfers from connecting lines, and it is from this yard that all freight trains for the west, north, and northwest are made up, and they start from that yard.

Q. You heard the testimony of Mr. Fertig as to the Blue [fol. 966] Island terminal of the Rock Island, did you not?

A. I did.

Q. Does Proviso on your line correspond more or less to the Blue Island terminal as he described it in the Rock Island?

A. It is. Proviso terminal is 14 miles from the heart of the city of Chicago.

Q. What eastern lines do you connect with by way of the Belt line as you have described it?

A. Erie, Pennsylvania, New York Central, Michigan Central, Baltimore and Ohio, the Grand Trunk, Pere Marquette.

Q. Are you familiar with the types of equipment, freight and passenger, both cars and engines?

A. Yes, sir.

Q. Used and owned by the Northwestern?

A. Yes, sir.

Q. I will ask you to refer to exhibit No. 2. Have you a copy of No. 2 showing the freight boxcars?

A. Yes, I have it here.

Q. Will you state from your knowledge of the freight boxcar equipment of the Northwestern whether, in general, it has developed along lines similar to those indicated by exhibit No. 2?

[fol. 967] A. It has.

Mr. Strouss: Of course, our objections go to the testimony of this witness.

The Court: The record may show the objection. It is overruled, a running objection to all this line of testimony.

Mr. Mason: Do you presently operate any freight boxcars in revenue service that are not all steel construction or steel underframe construction?

A. We do not.

Q. Now, as to passenger train cars, will you look at exhibit No. 4 and state whether or not the passenger equipment of the Northwestern has been developed along the lines indicated by that exhibit?

A. It has. In fact, we have a number of coaches that are identical to the coaches of the Southern Pacific that operate in through service between Chicago and San Francisco over the Southern Pacific, the Union Pacific, and Northwestern.

Q. In the so-called "Overland Route"?

A. In the so-called "Overland Route."

Q. Do they correspond in general design—well, are they in general design the cars shown here for 1937?

A. They are.

Q. Do you have any passenger cars in main line revenue [fol. 968] service of other than steel construction?

A. We have none.

Q. Does that include passenger cars in use in your suburban service, are they also of steel construction?

A. They are all steel construction.

Q. Does your company operate cars owned by the Pullman Company in its main line passenger trains?

A. They do, regular standard Pullman cars, the same as operated on all other railroads.

Q. You spoke of through line service of the Southern Pacific. Do some of these Pullmans operated on your lines operate over the Southern Pacific?

A. They do.

Q. What trains particularly?

A. Trains Nos. 27 and 28, and Challenger trains Nos. 87 and 88.

Q. Trains Nos. 27 and 28 are designated as the San Francisco Overland Limited, are they not?

A. Yes, sir.

Q. How about trains Nos. 14 and 21?

A. Also trains Nos. 14 and 21, the Pacific Limited.

Q. Does your company operate jointly with the Union Pacific and the Southern Pacific a Diesel-electric train of [fol. 969] special design?

A. They do.

Q. What is the name of that train?

A. The City of San Francisco.

Q. Do you recall any other passenger train operated on through schedules with the Southern Pacific and Union Pacific?

A. Yes, called the Forty-Niner trains Nos. 48 and 49, extra fare trains between Chicago and San Francisco.

Q. Is that an all-Pullman train?

A. All-Pullman train.

Q. Now, will you refer, please, to exhibits 5 and 6, No. 5 being the exhibit which shows the chronology of freight locomotive design on the Southern Pacific. Do your company have freight locomotives corresponding in general to the locomotives indicated on the exhibit?

A. We do. So far as the Consolidation locomotive is concerned, our tractive effort is a little larger than that of the Southern Pacific. Our Consolidation locomotives have a tractive effort of 51,600 as compared with the Southern Pacific 43,300.

Q. Are your Consolidation locomotives of the tractive effort you have just stated in main line freight service at the present time?

[fol. 970] A. Yes, sir.

Q. Do you have any Mikados in service?

A. Yes, sir. The preponderance of our freight locomotives are Mikados. The tractive effort of our Mikado is 60,160 as compared with the Southern Pacific 51,080.

Q. Are those Mikados of yours of comparatively recent acquisition or older locomotives?

A. They are the older locomotives. About 50 of them have been rebuilt though and stokers have been added to them.

Q. Do you use coal burner locomotives entirely or predominately?

A. Predominately, all freight locomotives east of the Missouri River are coal burning, and those west of the Missouri River are oil-burning.

Q. Do you have the larger types such as the 2-10-2 type, or a type corresponding to the Southern Pacific type?

A. We don't have a 2-10-2, but we have what we call the "Northern" type, 4-8-4, with a tractive effort of 71,800 pounds, which compares with your 2-10-2 of 75,150 pounds.

Q. Is your 4-8-4 Northern type used primarily in freight service?

A. Entirely in freight service. Then we have the type [fol. 971] called the "Berkshire," which compares favorably with your small 2-10-2, except that ours is a 2-8-4, with a tractive effort of 67,200, as compared with yours of 65,300.

Q. Are those more recent acquisitions, the Berkshire and the 4-8-4?

A. About ten or twelve years old. Let's see, the Berkshires were acquired in 1927 and the Northern in 1929.

Q. Now, do you limit the runs of those locomotives to one freight district or do you run them through freight terminals?

A. No, we run them through between Proviso and Council Bluffs, Iowa, and between Proviso and Wyeville, Wisconsin, by the way of Milwaukee, and between Proviso and Fond du Lac, Wisconsin.

Q. Will you refer to exhibit No. 6, the passenger train locomotive exhibit. Do you have locomotive types in service corresponding to any of those shown there?

A. Yes, we have the 4-6-0 type locomotives of 26,700 pounds tractive effort as compared with your 25,260 pounds.

Q. Are those used in main line service or suburban service?

A. Those are used primarily in local way-freight or [fol. 972] switch service.

Q. They are not used in passenger service at all?

A. No.

Q. As to main line passenger service, is the Pacific type in use?

A. Yes; we have several types of Pacific type, one with tractive effort of 28,700. That is used exclusively in suburban service; another with tractive effort of 33,600, which compares favorably with your Pacific 4-6-2 of the 29,920 pound tractive effort; then we have another Pacific type with tractive effort of 45,800 compared with your Pacific type of tractive effort of 43,660.

Q. Do you use any of these larger types, the Mountain or Golden State, in passenger service?

A. We have a type that compares somewhat to your Mountain type called "Hudson" locomotive, a 4-6-4, with tractive effort of 55,000 pounds, which compares with your Mountain 4-8-2 type of 57,510 pounds tractive effort.

Q. Are those Hudson locomotives and the large Pacific type locomotives of which you have spoken recent acquisitions?

A. The Hudson type locomotives are, they were acquired in 1938, and the larger Pacific type locomotives were [fol. 973] acquired in 1923.

Q. Are these locomotives, and I refer particularly to the later acquisitions, equipped with super-heaters?

A. They are.

Q. Feed water heaters?

A. They are.

Q. What is the character of braking equipment and the air compressor equipment on them?

A. They have compound air compressors. I can't tell you the type of braking equipment, Mr. Mason.

Q. Are the same characteristics true of your freight locomotives, that is to say, as to their being equipped with super-heaters and feed water heaters?

A. They are.

Q. Does your company handle Pacific Fruit Express Company cars?

A. They do.

Q. To what extent, speaking very generally?

A. Well, the great majority of the fruit and vegetable shipments from the western and northwestern territory are in P. F. E. cars.

Q. At what junction point do you receive those P. F. E. cars carrying the perishable loads you have mentioned?

[fol. 974] A. At Council Bluffs and at Wyeville from the Omaha line, those routed via the Twin Cities from the northwestern territory.

Q. At which of these two points does the greater preponderance of this perishable traffic come to you?

A. Council Bluffs from the Union Pacific.

Q. Does your company participate in schedules for the handling of perishable traffic?

A. It does.

Q. Does it participate in schedules for the handling of through traffic?

A. It does.

Q. In which direction do the perishable schedules apply?

A. Eastbound.

Q. Where do the perishables moving on those schedules principally originate?

A. California points, Sacramento, Rosedale territory.

Q. You mean Roseville?

A. Roseville.

Q. Does that include traffic originating also in Oregon?

A. Yes; the majority of the traffic originating in Oregon comes to us through the Twin Cities gateway.

[fol. 975] Q. This traffic coming from California and received by you at Council Bluffs, are you familiar with the routing?

A. Yes, sir.

Q. Over what routes and railroads does it generally move?

A. We receive it from the Union Pacific railroad and we deliver it to Belt lines at Proviso for delivery to various eastern railroads, depending upon how it is routed. It may be routed over any of the eastern railroads from Chicago, primarily the Erie, the Pennsylvania, and the New York Central.

Q. Can you say upon what railroad lines the traffic originates in the Pacific Coast territory?

A. The Union Pacific and Northern Pacific and Great Northern.

Q. Does any of it originate on the Southern Pacific or Western Pacific?

A. Some on the Western Pacific, and some on the Southern Pacific.

Q. Does your company also make deliveries to consignees at Chicago as well as to connecting lines?

A. They do.

[fol. 976] Q. Are you familiar with the schedules which contemplate delivery at Chicago?

A. I am.

Q. From what points do the eastbound schedules for the movement of perishables apply when the movement is to Chicago or to connections at Chicago? By that I mean from what points of origin?

A. From California and Oregon points.

Q. Is there any particular locality in California which forms the starting point of the schedule?

A. Only the Sacramento and Roseville territory.

Q. And as a participant in those schedules, does your company have a particular time period assigned to it?

A. Yes, we have a proportion of the time on the through schedule, predicated on the mileage we operate.

Q. You have heard reference made by Mr. Fertig to run-off time in connection with eastbound schedules?

A. Yes, sir.

Q. Will you say whether or not the schedules in which you participate contemplate run-off time?

A. It does.

Q. Does your company participate in the run-off time? [fol. 977] A. We do.

Q. Now, as to westbound schedules, from what points do those apply and to what destinations?

A. From Proviso to various points in the western territory west of Omaha, principally on the Union Pacific and the Burlington railroads.

Q. For example, are there schedules for delivery of freight originating in Chicago and east for delivery at Denver and Salt Lake?

A. Yes, sir.

Q. San Francisco?

A. Yes, sir.

Q. Los Angeles?

A. Yes, sir.

Q. Do you participate in all those schedules?

A. We do.

Q. And on the same basis as to apportionment of time as with the eastbound?

A. Yes, sir.

Q. Do you know and, if so, will you state whether your company makes delivery at Chicago or to connection at Chicago in conformity with the schedules, or what the percentage of performance may be?

A. Yes, sir, we make delivery at Chicago to connecting [fol. 978] lines in accordance with the agreed-to schedules, and from my knowledge I would say that our on-time performance will average 98 per cent.

Q. Are there other lines operating between Omaha and Chicago which participate in the handling of eastbound traffic through that gateway?

A. There are.

Q. Will you name some of them.

A. The Illinois Central; the Milwaukee Railroad; the Burlington; the Rock Island.

Q. Now, is there competition between these several lines, or do they apportion the traffic on an agreed basis?

A. There is competition between the Northwestern and the other lines.

Q. What is the nature of that competition?

A. Well, every one of the lines tries to perform the same service that the Northwestern does.

Q. Do you know whether or not there is active traffic solicitation for this business?

A. There is.

Q. Have you before you, Mr. Kraemer, a statement consisting of one sheet and bearing the designation "Chicago and Northwestern Railway Company, Typical Examples of Freight Trains Operated on Wisconsin, Galena, Iowa, Divisions, August 1-10, Inclusive, 1940"?

[fol. 979] A. I have.

Q. Was the statement prepared by you, Mr. Kraemer, or under your direction?

A. It was prepared under my direction.

Mr. Mason: May we have the statement just referred to marked for identification?

The Court: It may be marked.

The Clerk: Defendant's exhibit No. 75 for identification.

Mr. Mason: From what sources was the information shown on the exhibit originally taken?

A. From the dispatcher's train sheets.

Q. Does that include the information as to ruling grade, or is that taken from some other source?

A. The information as to ruling grade is taken from the chief engineer's condensed profile.

Q. Are the dispatcher's train sheets which, as you state, form the foundation for this exhibit, available in the court room?

A. They are.

Q. Are the profiles to which you have just referred also available?

A. They are.

Q. I take it that the computations where computations are indicated by the exhibit, have been made by you or [fol. 980] under your direction?

A. It has.

Q. And from the other information which shows upon the face of the exhibit?

A. Correct.

Q. Has the exhibit been checked against the underlying sources to determine its correctness?

A. Yes, sir, it has.

Q. Was that check made by you or in your office under your supervision?

A. It was made under my supervision.

Q. Will you state whether or not the exhibit is true and correct to the best of your knowledge and belief?

A. It is.

Q. These types of locomotives shown under the various appropriate columns on the exhibit, are those the types owned by the Northwestern, concerning which you have testified?

A. They are.

Q. I notice that the title contains the words "Typical examples." Did you select the period covered by this exhibit yourself?

A. I did.

Q. Will you say whether or not the month of August, and particularly the period August 1 to 10, represents a [fol. 981] fair average of the year's business, predicated your answer upon your own experience and knowledge of the company's business?

A. It does.

Q. This I take it then is neither the peak of the Northwestern's traffic nor the slack period?

A. It is not, it is a typical average. I selected a period in the middle of the year when the traffic would be about the average. The first four months of the year our traffic is usually light, and the second four months it is about the average, and the last four months it is considerably heavier, especially during September, October, and the fore part of November, when we move agricultural products and fruit and vegetables and ore and so forth.

Q. Now, relating this exhibit to No. 62, have you by any special means indicated on exhibit No. 62 the districts which are referred to on the statement marked No. 75 for identification?

A. I have. The districts that are referred to on exhibit marked No. 75 are shown on the map in heavy black line to distinguish that part of the Northwestern railroad from the other part, which is not covered by exhibit No. 75.

Mr. Mason: Have you any questions, Mr. Strouss?

[fol. 982] Mr. Strouss: Yes, I have one or two, just as a matter of information.

Q. In column B and C, are those division terminal points?

A. They are.

Q. I notice that there is one operation between Butler and Proviso, and another operation between Butler and Great Lakes. Are those over the same track?

A. They are not, they are for the first 14 miles, they are over the same track, but the tracks diverge at St. Francis. Looking on the map, St. Francis is just south of Milwaukee, and the territory from Butler to Great Lakes is along the lake shore route, while from Butler to Proviso it is along the tracks to the left of the lake shore route.

Mr. Mason: We offer the exhibit now as defendant's exhibit No. 75.

Mr. Strauss: The same objection.

The Court: Overrule the objection. It may be admitted.

(Thereupon the document referred to was received in evidence and marked "Defendant's Exhibit No. 75.")

Mr. Mason: In connection with the exhibit, of course, it [fol. 983] is understood that we tender the train sheets and the profiles for examination of opposing counsel.

The Court: Yes, the record may show that tender.

Q. Mr. Kraemer, how many miles do you have on your Northwestern lines, approximately?

A. 8,326.

Q. And this portion that shows the heavy dark line, approximately the mileage of that, please?

A. 770.

The Court: Thank you.

Mr. Strauss: Does the 8,326 include branches?

A. It does.

Mr. Mason: I take it, Mr. Kraemer, that the lines shown on exhibit No. 75 are your principal main lines of heavy freight traffic?

A. They are.

Q. And are these all lines which are subject to your own jurisdiction as assistant general manager?

A. Yes, sir.

Q. Now, in answer to a question from opposing counsel a moment ago, you said that these points shown in columns

B and C were all freight terminals. I notice, and I want to call your attention to line 23 and also to line 24, operations from Caledonia to Harvard; and from Harvard to Janesville. Just what is the nature of the operation between those points?

A. Janesville is a destination terminal of the Wisconsin division in the direction to Twin Cities. Harvard is an intermediate terminal between Proviso and Janesville.

Q. Now, does this exhibit show all of the trains which were operated between the points referred to during the period covered by the exhibit other than light locomotives, or locomotives and cabooses without other cars?

A. No, it doesn't show the way freights or locals.

Q. It shows the trains operating through between these points?

A. It does.

Q. As through trains?

A. Yes, sir.

Q. Would the way freights and locals appear on the same train sheets?

A. They do.

Mr. Strouss: What about light engines?

A. Yes.

Q. They are shown on here?

A. No.

Mr. Mason: Light engines, of course, are shown on the [fol. 985] train sheets?

A. They are.

Q. Mr. Kraemer, what is the standard weight of rail on the main lines of the Northwestern, particularly in your district?

A. 112 pounds.

Q. Do you have any main line districts, particularly those referred to on exhibit No. 75, where there is lighter rail?

A. Very little 100 pound rail, the vast majority is 112 pound rail.

Q. Is the 112 pound of recent installation in the track?

A. Within the last ten years.

Q. Did it replace lighter rail?

A. It did.

Q. Now, as to the bridges, you have numerous bridges in your main lines?

A. We have.

Q. You have at least two crossings of the Mississippi River, haven't you?

A. Yes, we have.

Q. Are there any of those bridges as to which the weight of the locomotive or the weight of the train crossing it must be limited because of the construction of the bridge? [fol. 986]. A. Not to my knowledge. The Mississippi River bridge at Clinton, Iowa, will take any class of locomotive that we have, or even that the Union Pacific has, because a great many of those locomotives when they come from the factory are routed over our line, those of their recent acquisition. With respect to the Mississippi River bridge at Winona, Minnesota, it would take our Mikado type locomotives. We have never attempted to operate any larger locomotives in that territory.

[fol. 987] Mr. Mason:

Q. Are there any main line bridges where any limitation is observed?

A. Not to my knowledge, not in my territory.

Q. Exhibit 62 indicates that the Northwestern has a considerable branch line mileage. Do you operate freight trains on these branch lines?

A. Yes, primarily over what we call strictly branch line that our stub lines radiating from the main line, as a general proposition all we operate is way freights. However, there are a good many other lines there that we call secondary main lines for a typical example, from Milwaukee up to Ishpeming, Michigan. We call that our secondary main line.

Q. Now, do the trains on your branch lines and secondary main lines exceed seventy cars in length or are they of shorter length?

A. In our secondary territories, on secondary main lines, they exceed 70 cars in length, but on none of the branch lines do they exceed 70 cars.

Q. What considerations, Mr. Kraemer, in your experience as an operating man, determine the length of freight trains operated by the Northwestern?

A. Primarily the volume of business and the schedule requirements, and during the winter months the weather conditions.

Q. When you speak of schedule requirements, just what [fol. 988] do you mean?

A. Where we are required to make certain guaranteed schedules, where there is a penalty involved when we don't make the schedules. In such cases we do not handle as many cars as we do where we do not have to maintain guaranteed schedules. For example, between Denver and Chicago, we have guaranteed livestock schedules of 36 hours. We agree to take that stock through from Denver to the Union Stock Yards within the 36-hour confinement limits. If we don't and the stock is unloaded enroute for feed, water and rest to comply with the law, and it is late arriving in the market, we are subject to a claim for any market loss there might be.

Q. Do you have regular scheduled departures for freight trains?

A. We have.

Q. When the connection for one of these scheduled departures is late, do you customarily hold for connection, or do you leave on schedule?

A. We customarily hold a reasonable amount of time. Take our west-bound schedules from Chicago, it is nothing unusual to leave Proviso from an hour and a half to two hours late, waiting for connections.

Q. When you speak of running these livestock trains which maintain a particular schedule, do you or do you not [fol. 989] run trains greater than seventy cars in length on schedule, similar to the livestock schedules?

A. We do.

Q. Mr. Kraemer, have you before you a statement in one sheet bearing the title, "Chicago & Northwestern Railway Co., Maximum Number of Cars handled in Various Main Line Passenger Trains between Chicago and Omaha during the period August 1-10, Inclusive, 1940?"

A. I have.

Mr. Mason: May we have the statement marked Defendant's Exhibit 76 for identification?

The Clerk: Defendant's Exhibit 76 for identification.

Mr. Mason: Was this statement prepared by you, Mr. Kraemer?

A. It was prepared under my direction.

Q. Did you supervise its preparation?

A. I did.

Q. From what sources was it prepared?

A. From the dispatcher's train sheets.

Q. Are those the same dispatcher's train sheets which were used in the preparation of exhibit 75?

A. They are.

Q. And the exhibit relates, as its title indicates, to the [fol. 990] same period?

A. Correct.

Q. Is that period from August 1st to 19th, inclusive, a period of heavy or was it a period of unusually heavy passenger traffic or of light passenger traffic, or how was it characterized?

A. It is really heavier than the normal traffic, due to the summer tourist business between Chicago and California. Other than that, it is normal performance.

The Court: Mr. Kraemer, I notice that a number of the other witnesses say that they selected a period in April as being a normal period. That is not true with your line? I notice you have taken August in both of these.

A. Yes. No, it isn't in so far as our passenger traffic is concerned. August would be a little bit heavier than April, probably about 10 per cent. The same is also true in so far as our freight traffic is concerned. However, if we had selected a later period, say September, our freight traffic would have been considerably heavier. I was not told what period to select. I got the request in September and I selected as recent a period as I thought we could and have the records available.

Mr. Mason:

Q. Has the exhibit been checked against the train sheets [fol. 991] to determine whether the showing here is correct?

A. It has.

Q. And will you say whether it is correct?

A. It is.

Mr. Mason: Have you any questions, Mr. Strouss?

Mr. Strouss:

Q. Of course, in subsequent months, during the winter, your passenger traffic would not be as heavy as through August, would it?

A. No, I said that August is about 10% heavier, but even during the subsequent months when the passenger traffic isn't so heavy, we make some consolidations of trains so that the length of trains over all is probably a little greater right now than it would be in August.

Q. Do you have any tourist trade to the parks, the Yellowstone Park and the Colorado?

A. We have.

Q. And that, of course, would be reflected in this exhibit?

A. Yes.

Q. The mileage is given as 488. Between what points is that?

A. That is between Chicago and Omaha.

Q. And the exhibit, as I take it, means that at some point during that trip, not necessarily all the way through, the [Col. 992] train carried the number of cars shown?

A. That is correct, although we have very little intermediate dropping off of cars, so that for the most part the consist of the train is carried through from Chicago to Omaha. There are only two sleepers that are dropped off between Chicago and Omaha, one at Cedar Rapids and one at Ames, Iowa, for Des Moines, and they are on two different trains.

Mr. Mason:

Q. Do you set out dining cars enroute between Omaha and Chicago on any of these trains?

A. No, dining cars all operate through between Chicago and Omaha.

Mr. Mason: Any further questions?

Mr. Strouss: No further questions.

Mr. Mason: We offer the exhibit in evidence as No. 76.

Mr. Strouss: The same objection.

The Court: Objection overruled. It may be received in evidence.

(Thereupon the document referred to was received in evidence and marked, "Defendant's Exhibit No. 76.")

Mr. Mason:

Q. Will you refer to No. 76, Mr. Kraemer. I will ask [Col. 993] you if you will identify some of these west bound

trains as trains operated jointly with the Southern Pacific as one of the other carriers. Can you pick out some of those?

A: There is a train known as No. 49, on line No. 1, the 'Forty-Niner' that is operated jointly with the Union Pacific and Southern Pacific. Also train No. 21, the Pacific Limited on line No. 2; also train No. 101 on line 8, the City of San Francisco; also train 27 on line 11, the Overland Limited; also train No. 87 shown on line 12, the Challenger. And east bound, train No. 48, line 15; train No. 14 on line 16, the Pacific Limited; train No. 102 on line 22, the City of San Francisco; train No. 28 on line 25, the Overland Limited; and train No. 88 on line 26, the Challenger, are all jointly operated trains between the Northwestern, the Union Pacific and the Southern Pacific Railroads.

Mr. Mason: That is all for the witness at this time. Mr. Strouss, do you desire to cross examine now or defer your cross examination?

Mr. Strouss: No, I just want to ask one question about this exhibit.

Q. I notice some of these trains appear not to be dailies, is that true?

A. That is true, for example the Forty-Niner is not a daily train. The City of—well, on this exhibit, the City of Portland is not daily, and the National Parks Special, line 3, train No. 19, is only operated during the months of July and August. The same way with the National Parks Special running on the eastbound trip, Train No. 20.

Q. The City of San Francisco in line 8, there appears to have been only one train run during that period?

A. That is correct, that operates every six days.

Q. And the City of Los Angeles, there were three during the period?

A. Yes, the City of Los Angeles operates every third day.

Mr. Strouss: I will defer my other cross examination until—

Mr. Mason: The train sheets have already been tendered, and of course, they are available for use in connection with this exhibit still.

The Court: Mr. Kraemer, referring to Exhibit No. 76 about which you have just been testifying, I notice in referring to the last column, designated "Total" that it appears there in some instances, the number of the cars, are 4, 2, 3 and even as low as 1's there on the City of San Francisco, line 8. It is possible that you are operating a through [fol. 995] train with only one car?

A. No, that total in the column "R" is the total number of trains operated during that period.

Q. Oh, the total number of trains?

A. Yes.

Q. And not the total number of cars?

A. No.

The Court: I see.

Mr. Strouss: That is just what I was asking about.

Mr. Mason:

Q. Then that will show in line 8, for example, Mr. Kraemer, that during this ten-day period you operated 101 once.

A. That is correct.

Q. Of twelve cars.

A. That is correct.

Mr. Strouss: Exclusive of the motor cars.

The Court: I think I understand. Any further questions of this witness?

Mr. Mason: That is all then, for the moment, Mr. Kraemer. I imagine this is an appropriate period for a recess.

The Court: Very well.

[fol. 996] (After recess.)

The Court: Call your next witness.

Mr. Booth: Call Mr. Callin.

A. E. CALLIN, called as a witness in behalf of the defendant, having first duly sworn, was examined and testified as follows:

Direct Examination.

By Mr. Booth:

Q. Will you state your name, please.

A. A. E. Callin.

Q. Where do you reside?

A. Omaha, Nebraska.

Q. What position, if any, do you occupy with Union Pacific Railroad Co.?

A. Accountant on the general staff of the General Auditor.

Q. How long have you occupied that position?

A. Oh, approximately sixteen years.

Q. With the same company?

A. With the same company.

Q. And prior to that time were you employed by the same company?

[fol. 997] A. Yes, in various positions. With the exception of three years I spent with the accounting division of the United States Railroad Administration.

Q. Located at Omaha or Washington?

A. Traveling in charge of checking of accounts of different railroads.

Q. A traveling auditor, in other words?

A. That is right.

Q. Checking the accounts of various railroads that were under federal control under the supervision of the Director General of railroads?

A. That is correct?

Q. There has been handed the clerk—

Mr. Booth: And we ask to have it marked for identification as an exhibit—

The Clerk: Defendant's Exhibit 77 for identification.

Mr. Booth: —77 for identification, what purports to be an outline map of the Union Pacific Railroad Company.

Q. I will show this map, Mr. Callin, and ask you whether generally speaking that shows the lines of the Union Pacific Railroad Company?

A. It does.

[fol. 998] Q. The territory in which those lines are located?

A. That is correct.

Mr. Booth: Any questions, Mr. Strouss?

Mr. Strouss: No, no questions.

Mr. Booth: We offer it in evidence.

Mr. Strouss: The same objection.

The Court: Overruled. It may be admitted.

(Thereupon the document referred to was received in evidence and marked, "Defendant's Exhibit 77.")

Mr. Booth: The significance of the heavy line will be explained by a succeeding witness. There has been handed to the Clerk and I ask to have marked Defendant's Exhibit 78 for identification a tabulation with explanatory notes entitled, "Union Pacific Railroad Co., Freight Operating and Freight Transportation Expenses Related to Traffic, Calendar Years 1922-1939, Inclusive."

The Clerk: Defendant's Exhibit 78 for identification.

Mr. Booth: Q. Mr. Callin, from what source or sources were the figures contained in columns B, C, and D of Defendant's Exhibit No. 78 for identification, which appear opposite the years 1922 to to 1939 inclusive secured?

A. From the annual reports to the Interstate Commerce Commission, with one exception.

[fol. 999]. Q. What is that exception?

A. During the years 1922 to 1933, inclusive, it was the practice of the individual lines at that time comprising the Union Pacific System, to assess freight charges at commercial rates, one line against the other, and likewise to compile revenue ton-miles on such traffic and report it to the Interstate Commerce Commission as revenue ton-miles. Commencing January 1, 1933, that practice was discontinued and the material was hauled free by one company for the other, just the same as it is today by the consolidated company.

Q. When you speak of other companies, you mean subsidiary companies.

A. The companies that now comprise the present Union Pacific Railroad Company and its leased lines.

Q. Referring to the note on this exhibit at the foot of the exhibit preceded by a star in brackets, the affiliated or proprietary companies to which you refer are named in that note, are they not?

A. Yes, sir.

Q. And they were the Oregon Short Line Railroad Company, the Oregon-Washington Railroad and Navigation

Company, the Los Angeles and Salt Lake Railroad Company, and the St. Joseph and Grand Island Railway Company?

[fol. 1000] A. That is correct.

Q. All these reported directly to the Interstate Commerce Commission on Annual Report, Form A, from the year 1922 to what year, inclusive?

A. 1935, inclusive.

Q. And after the year 1935, was there any change in their method of reporting?

A. Commencing January 1, 1936, all of the lines named were leased by the Union Pacific Railroad Company and operated as one operating company, and thereafter the Union Pacific made the Annual Report of all operations. But for corporate purposes; in the year 1936 the report was made on Form E for the other four companies that are now leased by the Union Pacific.

Q. That is OS-E?

A. No, not OS-E, I. C. C. Form E. It was an annual report blank provided for companies of that character, non-operating companies.

Q. Non-operating companies?

A. Yes, sir.

Q. But the operating statistics in so far as they relate to this exhibit, after January 1, 1936, are contained in the annual reports of the Union Pacific Railroad Company for the years 1936 to 1939, inclusive, are they?

[fol. 1001] A. Yes, sir.

Q. Will you take Defendant's Exhibit No. 77 and point out and describe to the court for the benefit of the record on Defendant's Exhibit 77, first, the lines of the Oregon Short Line Railroad Company, where they begin and end?

A. From Granger, Wyoming, to Huntington, Oregon, and from Ogden, Utah, to Butte, Montana.

[fol. 1002] Q. And the lines of the Oregon-Washington Railroad and Navigation Company?

A. From Huntington, Oregon, to Seattle and Spokane, Washington.

Q. And the lines of the Los Angeles and Salt Lake Railroad Company?

A. From Ogden to Los Angeles.

Q. And the lines of the St. Joseph and Grand Island Railroad Company?

A. From St. Joseph, Missouri, to Hastings and Grand Island, Nebraska.

Q. Where is Huntington by reference to the exhibit?

A. Do you wish me to connect it close to some point?

Q. Connect it close to some point on the map.

A: It is not far from the state line between Idaho and Oregon, a short distance beyond—

Mr. Mason: Practically at the Oregon-Idaho line.

A. —beyond Boise, Idaho, but not shown on this map.

Mr. Booth: Beyond Boise, Idaho, near the state line.

A. West, near the state line.

Q. That is, west of Boise, Idaho.

[fol. 1003] A. Yes, sir.

Q. What annual reports of the Union Pacific Railroad Company and the subsidiary or proprietary companies you have named have you with you here in the court room?

A. All of them.

Q. For the period covered by the exhibit?

A. Yes, sir.

Q. How many in number are there, approximately?

A. About sixty.

Q. Referring to the first paragraph of the Source note, which reads, "Revenue ton-miles—Annual Reports to Interstate Commerce Commission, excluding company material hauled by one Union Pacific line for another as revenue freight prior to January 1, 1934," what was the purpose of making that exclusion in preparing this exhibit?

A. To place the figures for the years 1922 to 1933, inclusive, on a comparable basis with the succeeding years.

Q. And they would not have been on a comparable basis had the company material been included in the first period and excluded in the second?

A. That is correct, because it was considered as revenue ton-miles prior to 1934.

Q. And can you and do you as an accountant say that [fol. 1004] with that computation and that exclusion the revenue ton-miles are now on a comparable basis throughout the years 1922 to 1939, inclusive?

A. Yes, sir.

Q. Now, will you explain, please, the second paragraph of the source note, "Freight operating and transportation

expenses—Annual Reports to the I. C. C. with an addition to total freight expenses of a proportion of some joint facility expenses under Maintenance of Way & Structures and some locomotive repair, depreciation and retirement expenses under Maintenance of Equipment prior to January 1, 1927, that were reported in Annual Reports to the I. C. C. and not apportioned to freight or passenger?

A. Those were some expenses which according to the rules of the Interstate Commerce Commission we considered we had no basis of making the apportionment between freight and passenger service. Under that technical interpretation no apportionment was made. But commencing in 1927, it became the practice to apportion all of those expenses on an appropriate basis.

Q. So that you went back of 1927 and made this apportionment?

A. So as to bring in the entire amount of the operating [fol. 1005] expenses, to put it on a comparable basis with the method followed thereafter.

Q. Did you resort in any respect in preparing this exhibit to your Form OS-A?

A. No.

Q. Did you make or personally check the computations shown in Columns E and F, and in the three lower blocks of the exhibit?

A. I did not do so personally, I had them checked by a comptometer operator.

Q. Are you satisfied they are true and correct?

A. I am satisfied they are correct. They are first made, then verified.

Mr. Booth: Any questions?

Mr. Strouss: No.

Mr. Booth: We offer this in evidence as Defendant's Exhibit No. 78.

Mr. Strouss: The same objection.

The Court: Objection overruled. It may be admitted.

(Thereupon, the document referred to was received in evidence and marked "Defendant's Exhibit No. 78.")

Mr. Mason: And we tender for counsel's inspection the 60 reports, or thereabouts.

Mr. Booth: There has been handed to the Clerk and we [fol. 1006] ask that there be marked for identification as

Defendant's Exhibit No. 79, a proposed exhibit in one page, headed "Union Pacific Railroad Company (See note), Freight Service Operating Averages, Calendar Years 1922, 1924, 1926, 1928, 1930, 1932, 1934, 1936, 1938 and 1939."

Have you a copy

The Clerk: Defendant's Exhibit 79 for Identification.

Mr. Booth: Have you a copy of this proposed exhibit,

Mr. Callin?

A. I have.

Q. Are the sources from which the items shown in the first block of the exhibit and numbered from 1 to 10, inclusive, correctly shown in the five notes headed "Source"?

A. They are with the exception of the first note. I would like to add to that a little.

Q. Very well.

A. For the years prior to 1936, some of our lines did not report all of their operative mileage as being operated in freight service, but under our present arrangement since 1936 we report all operative mileage as operated in the freight service, operated, reported to the I. C. C. as operated in freight service at the end of the month. So we take it all as operated in freight service, because it is operated [fol. 1007] in freight service. So, in order to make the figures comparable for the years prior to 1936 with those for 1936 and subsequently, I used the total average mileage operated, the same as we are doing today.

Q. And you took the figure you used from the Annual Report—

A. That is correct.

Q. —of the Union Pacific Railroad Company to the Commission?

A. I took it from the different roads comprising the present Union Pacific Railroad Company, and excluded therefrom the mileage that was operated jointly by two or more companies, what we call duplicated mileage.

Q. Then in the case of jointly operated mileage you would not credit both roads with it, but only one?

A. We placed it on a system basis. We credited it just once.

Q. Was there a great amount of that jointly operated mileage?

A. No, there is only about 25 miles.

Q. It wouldn't alter the percentage increase shown in the last column, of 1939 over 1922, to any appreciable extent?

[fol. 1008] A. Very little.

Q. The relation that "25" bore to "9901."

A. Yes.

Q. You refer in these notes to Forms OS-A and OS-E, respectively. Have you here in the court room the Forms OS-A and OS-E for the Union Pacific Railroad Company and the affiliated companies in the note at the bottom of the exhibit, in so far as those forms were used in the preparation of this exhibit?

A. Yes, sir.

Q. Are those available for the inspection of counsel?

A. They are.

Q. Were the formulas mentioned in Items 5, 6, 9 and 10 of the Source note followed in the construction of this exhibit?

A. Yes, sir.

Q. And is the exhibit true and correct and in accordance with the sources and the source note to the best of your knowledge and belief?

A. Yes, sir.

Mr. Booth: Any questions?

Mr. Strouss: No questions.

Mr. Booth: We offer it in evidence.

Mr. Strouss: The same objection.

[fol. 1009] The Court: Objection overruled. It may be admitted in evidence.

(Thereupon, the document referred to was received in evidence and marked, "Defendant's Exhibit No. 79.")

Mr. Booth: We tender the OS-A's and OS-E's, together with the—

We ask that there be marked for identification as Exhibit No. 80, a typewritten statement just handed the Clerk, containing a list of commodities which I shall describe.

The Clerk: Defendant's Exhibit 80 for Identification.

Mr. Booth: Referring to Defendant's Exhibit 80 for Identification, did you personally prepare this, Mr. Callin?

A. Yes, sir.

Q. When was it prepared?

A. Last night and this morning.

Q. Is it correctly described in the title, which is "Statement showing number of Carloads of Revenue Freight Carried during the Year 1939 for Certain Selected Commodities, Total Products of Agriculture and Total Carload Traffic; also, Total Cars and Tons by General Commodity Groups for Carload Traffic, and Total Tons of l. c. l. and of [fol. 1010] all Traffic carried, as shown in Schedule 541 of the Annual Report to the Interstate Commerce Commission"?

The Court: Mr. Booth, may I ask what l. c. l. means?

Mr. Booth: Less than carload.

Q. Is that correct?

A. That is correct.

Q. That applies, for instance, to a case where a number of shipments for different consignees are contained in the same car, or where a consignor has not loaded his car to the minimum carload weight?

A. That is correct.

Q. And the less than carload freight, according to this exhibit, handled by the Union Pacific Railroad Company during 1939 was but 367 thousand odd tons, as compared with 26-million odd tons handled as carload traffic?

A. That is correct.

Q. Now, will you state whether the Items 110 to 143, inclusive, on this exhibit are entirely and literally taken from the Union Pacific Railroad Company's report to the Interstate Commerce Commission on Form A for the year 1939?

A. They were, from Schedule 541.

Q. Without change or computation?

[fol. 1011] A. Without any change.

Q. The totals under those items were made by you, were they not?

A. Yes, sir.

Q. And are they correct?

A. They are.

Q. The items designated as Total Products of Agriculture and Grand Total Carload Traffic, were those taken by you from the same report?

A. Yes, sir.

Q. And are correctly shown?

A. Yes.

Q. The cars and tons shown opposite the designations of the various groups in Schedule 541, the last subject of the

exhibit, are those abstracted by you correctly from that report and are they correct?

A. They were, and they are correct.

Mr. Booth: I will state that the totals just referred to were read in the record on the testimony of a former witness, and for the sake of accuracy I asked the witness to include them in this exhibit.

That is all.

We offer the exhibit in evidence as Defendant's Exhibit No. 80.

Mr. Strouss: The same objection.

[fol. 1012] The Court: Objection overruled. It may be admitted.

(Thereupon, the document referred to was received in evidence and marked "Defendant's Exhibit No. 80.")

Mr. Booth: Do you desire to defer cross-examination?

Mr. Strouss: No, I think I will ask a general question and then I will look at these—I don't want to look at sixty of them, however—reports this evening. If I have any more questions, I will call him back, and if not, it won't be necessary.

Q. Mr. Callin, referring to this Exhibit 78, "Freight Operating and Freight Transportation Expenses Related to Traffic," the amounts shown in Column C represent the total of items 201 to 462 of the Annual Report?

A. That is correct.

Q. And Column D, accounts 371 to 420 of the Annual Report?

A. Inclusive.

Q. Inclusive?

A. Yes, that is right.

Q. Now, on Defendant's Exhibit 79, you had a deduction in mileage after 1932. What was that deduction? Was that due to abandonment, do you know?

[fol. 1013] A. Yes, abandonment of lines, branch lines.

Q. Unprofitable branch lines?

A. Yes.

Mr. Strouss: That is all.

Mr. Booth: With the permission of the Interstate Commerce Commission, as you understand it?

A. Yes, in all cases.

Mr. Booth: That is all.

Mr. Mason: Your Honor, in connection with Exhibit No. 80, we will prepare a stylographic copy in form similar to the others, and will ask leave to substitute it when it is available.

The Court: The substitution may be made.

(Witness withdrawn.)

R. C. RANDALL was called as a witness on behalf of the defendant and, being first duly sworn, testified as follows:

Direct examination.

By Mr. Mason:

Q. Will you state your name and residence to the reporter?

A. R. C. Randall; Cleveland, Ohio.

Q. What position do you occupy with the Erie Railroad?

A. Assistant to the Operating Vice President, of the Erie [fol. 1014] and Chicago and Erie Railroad.

Q. What has been your experience in the railroad business, Mr. Randall?

A. I entered the service of the Erie Railroad on April 1, 1906. I was employed in various clerical capacities in the operating department until October, 1910, and then I was away from the railroad approximately a year and a half until April, 1912, going to a business school; I resumed service on April 1, 1912, as yardmaster on the Kent Division, Marion, Ohio. I held that position until 1917, when I was made assistant general yardmaster at the same point; and on October 1, 1918, I was made general yardmaster at the same point, and I held that position until May, 1922, when I was transferred to Hammond, Indiana, as general yardmaster. On October 1, 1926, I was made trainmaster of the Marion Division, located at Chicago, Illinois. In March, 1927, I was made assistant superintendent of the Chicago terminals. On September 1, 1928, I was transferred to assistant superintendent of the New York Terminal Division. On September 16, 1929, I was made superintendent of the New York Terminal Division, and I held that position until the first of June, 1934, when I was transferred to Scranton, Pennsylvania, as superintendent of the Wyom

[fol. 1015] ing and Jefferson divisions and the W. B. and E. Railroad, and on October 1, 1935, I was transferred back as superintendent of the New York Terminal Division. On February 1, 1938, I was made assistant general manager of the Western District, located at Youngstown, Ohio, covering lines west of Hornell, New York, and Buffalo, New York, to Cleveland, Chicago and Dayton, Ohio. On July 1, 1939, I was transferred as assistant general manager to the Eastern District, located at Jersey City, New Jersey, covering the lines from Jersey City to Buffalo and Hornell, New York, including the Rochester division, Rochester, New York, the Wyoming Division to Avoca, Pennsylvania. On November 1, 1939, I was made assistant to the operating vice president at Cleveland, Ohio.

Q. Your experience and jurisdiction has included the entire line of the Erie and the Chicago and Erie from Chicago to Jersey City, has it not, Mr. Randall?

A. Yes, sir.

Q. Have you seen Exhibit No. 55 for Identification, which was marked during the testimony of Mr. Oakley?

A. I have.

Q. Will you say whether or not the exhibit is a fair representation in outline of the lines of the Erie and Chicago and Erie—and I will refer to them both as the “Erie” from now on—and of the territory through which the line runs?

A. It is a fair representation, but there is one correction.

Q. Will you indicate what that should be?

A. The point on the exhibit which is indicated as “Waterloo” should be “Waterboro.”

Mr. Mason: We will ask that the record copy and the copies in the hands of counsel be changed accordingly. I think there is also a mistake here in the spelling of Susquehanna. It should be S-u-s-q-u-e-h-a-n-n-a.

A. Yes.

The Court: The two changes may be made upon the original record.

Mr. Mason: With those corrections, your Honor, we offer the exhibit in evidence as number 55.

Mr. Strauss: The same objection.

The Court: Objection overruled. It may be admitted.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 55.")

Mr. Mason: Now, as superintendent, and later as assistant [fol. 1017] and general manager, and now as assistant to the operating vice president, do you make frequent trips over the lines of the Erie?

A. I do.

Q. Do you always travel by passenger train?

A. Not always.

Q. Do you ever make such trips by freight train?

A. Yes, sir.

Q. By track motor car?

A. Yes, sir.

Q. Do you sometimes make them in a business car?

A. Yes, sir.

Q. When you travel in a business car, do you ever use freight trains?

A. Yes, sir.

Q. Where is the business car placed in the freight train?

A. Behind the caboose on the extreme rear end of the train.

Q. Does the Erie operate trains of greater lengths than 70 cars over its main line?

A. It does.

Q. When you make your trips with the business car on the freight train, do you select the particular train according to length for that purpose?

A. No, sir.

[fol. 1018] Q. What do you do?

A. I place the business car on any freight train that I wish to travel on, regardless of the length of the train.

Q. Have you ever had the car on the rear end of trains of more than 70 cars?

A. Yes, sir.

Q. Can you recall the longest freight train upon which you have traveled during the past year or two in that manner?

A. One hundred and twenty-five cars, on the Wyoming Division in mountain territory.

Q. Have you in the course of your career as an officer of the Erie become familiar with the fixed property, and by that I mean the roadbed, bridges, rails, and so forth?

A. In a general way, yes, sir.

Q. Have you also become familiar with the rolling equipment?

A. Yes, sir.

Q. Are you familiar with the operating rules of the Erie?

A. Yes, sir.

Q. Do you have a regular code of rules?

A. We do.

Q. Do you know anything about the A. A. R. Standard [Vol. 1019] Rules that have been referred to?

A. I am familiar with it. Our code of rules is practically the A. A. R. code, with the exception of a few rules to cover certain local conditions.

Q. Is the Erie equipped with block signals on any part of its main line?

A. The entire main line is equipped with block signals. The entire line over which the passenger trains operate is equipped with block signals. There is a certain portion of our railroad over which freight trains operate that we have the manual block.

Q. Your line is predominantly a freight carrier, is it not?

A. Yes, sir.

Q. And the passenger service is not emphasized to a great extent?

A. What we have is as good as anybody else's, but it is limited.

Q. Do you have any territories on your main lines where more than one locomotive is used to handle trains which are elsewhere handled with a single locomotive?

A. Yes, sir; we have two pusher grades on our main line, one about ten miles in length out of Susquehanna, Pennsylvania on the Delaware Division; another pusher grade about eight miles in length on the New York Division [Vol. 1020] sign just east of Port Jarvis, New York.

Q. Do you regularly operate helpers in those districts with the ordinary freight train?

A. Yes, sir.

Q. What are the ruling grades in those particular territories?

A. The ruling grade in the direction of east-bound traffic on the Susquehanna hill is 1.36; on the Port Jarvis hill, so-called, it is 1.1.

Q. Are you familiar with the ruling grades elsewhere on that railroad?

A. Yes, sir.

Q. Generally speaking, the ruling grades elsewhere are less than one percent, are they not?

A. That is right.

Q. Is the principal main line between Chicago and Jersey City double tracked in any part?

A. In order to make it clear, our passenger trains operate over one route, one portion of the railroad, and our freight trains operate over another route, on certain portions of the railroad.

A. Yes, sir.

[fol. 1021] Q. Looking at the map, exhibit No. 6, do you designate there by weight of line the districts over which freight trains operate?

A. Yes, sir.

Q. And your passenger train operations, I take it, are in some districts over another line than the ones designated by the heavy weighted line.

A. That is right.

Q. Is the preponderance of the freight lines double track or single track?

A. It is 980 miles from Hammond, Indiana, to Croxton, New Jersey. All of this line is double tracked, with the exception of 101 miles. There is 30 miles between S. N. Junction and Pymatuning that is single track and operated under manual block rules. There is 28 miles between Shenango, Pennsylvania, and Buchanan, Pennsylvania, that is single track, over which both freight and passenger trains operate, and it is automatic block territory. There is 10 miles from Waterboro, New York, to R. H. Tower that is single track and it is operated under traffic route control signals. There is 33 miles from Cuba Junction, New York, to River Junction, New York, which is single track for freight operations only and is operated under manual block rules. The balance of the railroad is double track and [fol. 1022] automatic block territory.

Q. Now, you speak of manual block rules. Will you explain briefly the difference between manual block and automatic block?

A. Manual blocks are blocks designated by the dispatcher to the operator and operated manually by an operator.

Q. And traffic route control, what is that?

A. Traffic route controls are signals operated at the direction of the dispatcher where traffic is moving in both

directions on a single piece of track, the dispatcher can of his own discretion, based on his own judgment, give the eastbound or westbound train the right to operate over that particular piece of track; and it is controlled by signals actuated by operators, or the dispatcher himself in some cases.

Q. Traffic route control is wholly distinct from centralized traffic control where the dispatcher operates the switches and lets the trains in and out of sidings, is it?

A. Well, yes. We also have in this territory between Shenango and Buchanan some remote control sidings, in other words, sidings on single track where the switches are controlled by remote control, by a tower at one end or the other of the siding.

[fol. 1023] Q. Have you been furnished with a copy of defendant's exhibit No. 2?

A. I have.

Q. Now, without undertaking to go into details at any length, would you say whether the freight boxcars owned by the Erie have been developed and improved along lines substantially similar to those indicated for Southern Pacific boxcar equipment?

A. I would say they have, the one difference being that we went to the steel superstructure car in 1911, whereas the Southern Pacific, as the exhibit indicates, went to it in 1913; and we have adopted the all-steel cars in 1928, whereas, according to this exhibit, you adopted them in 1936 and 1937.

Q. Does the Erie now operate any wooden underframe boxcars in revenue service?

A. No, sir.

Q. Will you refer to the passenger car exhibit, No. 4. Has the development of the Erie Railroad's passenger cars proceeded along the lines indicated by this exhibit, generally speaking?

A. Up to the point where you went into the articulated units and that type of equipment, we don't have any of that.

Q. Do you operate any wooden passenger cars?

[fol. 1024] A. No, sir, nothing but all steel cars.

Q. Are they largely air conditioned as well?

A. Well, we are progressively air conditioning them. We have some 40 air conditioned cars on our property at the present time.

Q. I take it that the construction here shown for coaches has extended to your dining cars and other passenger carrying equipment?

A. It has.

Q. Do you operate Pullman cars in your passenger service?

A. Yes, sir.

Q. Do they differ in type from those operated on other railroads?

A. They are the standard type Pullman cars such as operated on other lines.

Q. Will you refer to the locomotive exhibits 5 and 6. Does the Erie have locomotives of types similar to those shown?

A. We have certain of the types as indicated on your exhibit. We have the Consolidation, the 2-8-0 locomotive, we have the Mikado, the 2-8-2, we also have some Decapod locomotives.

Q. That is the 2-10-0 wheel arrangement?

A. 2-10-0. We operate some Pacific type locomotives, 4-6-2, in freight service, and we also have the Berkshire [fol. 1025] type of engine, the 2-8-4, which is not in the exhibit here.

Q. How does your Berkshire type compare in tractive effort with any of those freight locomotives shown here?

A. The Berkshire type that we have, the tractive effort is 72,000. They are all equipped, or most of them, are equipped with boosters, which increases that tractive effort to about 84,000.

Q. Do you have any of this 2-10-2 or the Santa Fe type?

A. We also have some Santa Fe type locomotives. The tractive effort of those locomotives is 83,000, which compares—it is a little higher than this 2-10-2 you have on this exhibit.

Q. Do you operate a Mountain type locomotive or something similar to that?

A. No, sir.

Q. Do you have the 4-6-4 type referred to here?

A. No, sir.

Q. Do your passenger locomotives, any of them, correspond in wheel arrangement with those shown on No. 6?

A. Well, our passenger power is represented by 4-4-2, the Atlantic type of locomotive, 4-6-2, the Pacific type loco-

[fol. 1026] five, that is the only two types of passenger power.

Q. How do your Pacific type locomotives compare with the Pacific type shown here as to tractive effort?

A. Just about the same.

Q. Are your freight and passenger locomotives equipped with super-heaters?

A. Yes, sir.

Q. Feed water heaters?

A. Yes, sir.

Q. I think you have mentioned boosters. Is that—

A. Some of our K-5 passenger engines, the Pacific type engines, have recently been equipped with boosters.

Q. Does your company operate in suburban service in the neighborhood of New York City?

A. Quite extensively.

Q. Also in the neighborhood of Chicago?

A. No, sir.

Q. Is that suburban service operated over the same lines as the freight service?

A. Well, in part, yes. I would say generally yes.

Mr. Mason: I have to turn to another subject matter, Your Honor.

[fol. 1027]. The Court: The court will be at recess until 10 o'clock tomorrow morning.

(Thereupon the court stood at recess until 10 A. M., December 6, 1940.)

[fol. 1028] December 7, 1940. 10:00 A. M.

All parties being represented as heretofore noted, proceedings were resumed as follows:

The witness, R. C. RANDALL, was recalled to the stand and testified further as follows:

Mr. Mason:

Q. Mr. Randall, I call your attention to Defendant's Exhibit No. 2. From your familiarity with the Erie box car equipment, will you say whether or not the development of the Erie's box cars has proceeded on substantially similar lines as indicated by Exhibit No. 2?

A. They have.

Q. Does the Erie now operate in revenue service any cars other than steel or steel underframe construction, that is, of Erie ownership?

A. No, sir.

Q. And of course, you don't operate any interchange cars of wooden construction?

A. No, sir.

Q. Have the improvements in the Erie equipment taken place at about the same times as indicated here, or earlier or later?

A. Well, the Erie went to steel superstructure cars in 1911 and to all-steel cars in 1928. In fact, all of our freight equipment today is built on recommendation of the A. R. A. [fol. 1029] and A. R. A. standards.

Q. You are familiar with those A. R. A. standards, of course?

A. Generally, yes sir.

Q. Referring to passenger car equipment, as indicated on Defendant's Exhibit 4—

The Witness: If I might interrupt, I think you asked me that yesterday.

The Mason: I will pass that, then.

Q. Does the Erie Railroad Co. maintain or participate in schedules for the transportation of freight eastbound and westbound?

A. Yes, sir.

Q. Do those include schedules entered into jointly with connecting lines?

A. Yes, sir.

Q. Do any of those schedules apply to the movement of perishable traffic eastward from producing points in the Pacific States and related adjacent territory, such as Arizona?

A. They do.

Q. Will you explain briefly the schedule for the movement of perishable traffic originating in Southern California and Arizona and in which the Erie participates?

[fol. 1030] A. We have what is known as a third morning delivery from Chicago to markets in New York and New England. We have published cut-off times at which we will receive traffic from west lines at Chicago. We receive our

traffic; traffic of this type, through gateways at Chicago, the Belt Railroad of Chicago, the interchange point is Clearing yard, and through the Indiana Harbor Belt Railroad. They deliver this traffic into our Hammond yard.

Q. What are those cut-off times?

A. The cut-off time for our train No. 98, which is our night train out of Chicago, a third morning delivery train into New York, the cut-off time at Clearing is 4:15 P. M.; the cut-off time at Hammond through the Indiana Harbor Belt connection is 6:00 P. M.

Q. What time does that train 98 make between Chicago and your Jersey City terminal?

A. Approximately forty-five hours.

Q. That will bring it into—

A. Approximately at 3:45 P. M.

Q. The second afternoon?

A. The second afternoon.

Q. Now, does the Erie maintain special facilities for the handling of perishable traffic arriving at New York City?

[fol. 1031] A. Yes, sir.

Q. Will you describe these briefly?

A. Well, we have a large fruit-holding yard in our Croxton yard. We have icing facilities at that point. In the city of New York we have large piers, Nos. 20 and 21 on the North River, where this fruit is unloaded and displayed for sale. We have to float all of that fruit from the Jersey shore on car floats propelled by tugs.

Q. Then the transportation that you perform from Hammond to New York City includes the rail transportation plus floating the cars across the Hudson River to Manhattan itself?

A. That is right.

Q. What is the rail distance from Hammond to the Jersey City terminal?

A. Over the freight line, 980 miles.

Q. Do you have other schedules besides the schedule for Train 98?

A. Yes sir, we have Train 74, which is scheduled to leave Hammond at 9:30 A. M. and arrive at Croxton at 1:30 A. M. the second morning after, second afternoon placement. The cut-off time for traffic from western connections for that train is 6:00 A. M. Clearing at the Belt Railroad, Chicago, 8:00 A. M. at Hammond through the Indiana Harbor Belt.

[fol. 1032] Q. You spoke of icing facilities at Croxton, that is the Jersey City terminal yard. Do you have these facilities at other points intermediate between Hammond and Croxton?

A. Yes, we have large icing facilities at Marion, Ohio, Hornell, New York, and auxiliary icing facilities at Port Jarvis, New York, for traffic moving to New England through the Maybrooke gateway.

Q. Does the Erie re-ice cars in transit at these points?

A. As the billing designates, as the billing on the cars may designate.

Q. Now, would you describe briefly how the icing in transit is performed at Marion, for example?

Mr. Strouss: I don't see how that would be of any materiality in this case.

Mr. Mason: That is an operation precisely the same as we perform in Tucson; we perform it at El Paso, at Yuma and on the same class of traffic.

The Court: The objection is overruled.

A. The billing on which the cars are traveling, designates the type of icing they should receive. These trains are pulled into a track adjacent to a high platform and the ice is placed from this platform into the ice bunkers of the [fol. 1033] cars.

Mr. Strouss: Of course, my objection heretofore made goes to all this testimony?

The Court: Yes.

Mr. Mason: Does that icing operation involve breaking up the train for the purpose?

A. No, it doesn't involve breaking up the train, but at Marion, Ohio and Hornell, New York, where we have these icing facilities, we do our major classification work on the trains at these points.

Q. From your observation, about how long does the operation of icing at Marion or Hornell take?

A. Well, our freight schedules provide for two hours at each of those points for icing and classification of the train. The icing part of that work ordinarily does not consume over forty-five minutes to an hour.

Q. Does the length of the train or the number of refrigerator cars to be iced have any effect upon the amount of time taken?

A. Yes, the platform at both of these points holds approximately 25 cars, and as we ice the cars we have to progress the train ahead.

[fol. 1034] Q. Do you have any method of keeping track of the perishable cars received by you at Hammond or Clearing yard and of their progress toward their destinations?

A. Yes, sir, we do. We have a teletype installation on our railroad and when those trains leave Hammond there is a report which we call a passing report placed on this teletype system and car number, initial, contents, destination, consignee is advanced to the superintendent of transportation's office in Cleveland, to the general manager's office in Jersey City, and when that information is received at Jersey City there is a passing notice furnished receivers. When those trains pass Meadville, Pennsylvania, that same information is furnished to our general manager's office in Jersey City and also passed on to the receivers of the traffic by mail notice.

Q. Do you have any way of sending information of the passing and progress of the cars to the shippers?

A. The agent at Duane Street, New York, receives a copy of this passing report from Hammond and from Meadville and he in turn sends out via messenger or United States mail a notice of passing to the receiver.

[fol. 1035] Q. I had in mind notices sent to the consignor at the point of origin. Do you have any way of getting information to them?

A. These passing reports that go into our superintendent of transportation's office are made up in train order on a form and those forms are air-mailed to all of our off-line agents including those in San Francisco and Los Angeles and by 10 A. M. the morning following the passing of Meadville that information will be in the offices of those off-line representatives.

Q. Do you know whether the off-line representatives advise the shippers?

A. It is my understanding that they do.

Q. That is part of the regular conduct of the business?

A. Yes, sir, it is part of an improved service that we put in for the benefit of the shippers.

Q. Do you have any additional eastbound schedules besides the two trains that you have mentioned?

A. We have one additional scheduled train from Chicago to Jersey City but it does not handle western connection perishable traffic. It handles particularly late loadings out of the packing houses in Chicago and miscellaneous traffic [fol. 1036] interchanged to us by western lines.

Q. How far do you run the locomotives which handle these scheduled freight trains?

A. We operate Mikado engines from Hammond to Marion, Ohio, a distance of 249 miles and we operate Berkshire engines east of Marion to Croxton and we operate them from Marion to Meadville, Pennsylvania, over two operating divisions, from Meadville, Pennsylvania, to Hornell, New York, over two operating divisions and from Hornell, New York, to Croxton, New Jersey, over three operating divisions.

Q. You make the entire run from Hammond to Croxton—

A. (Interrupting) Four locomotives ordinarily.

Q. With three changes or four locomotives in all?

A. Yes, sir.

Q. Do you have westbound schedules corresponding to the eastbound schedules that you have described?

A. We do.

Q. Do those contemplate deliveries to connections at Chicago as well as deliveries within Chicago itself?

A. Yes, sir.

[fol. 1037] Q. Will you describe your westbound schedules?

A. Our train 77 and train 91 are two third-morning delivery trains into Chicago from Jersey City.

Q. What is the closing hour at Jersey City?

A. The closing hour of our stations at Jersey City is 4:30 P. M.

Q. That is of traffic for those trains?

A. Traffic for those trains, and 77 is due to arrive in Chicago at 10 P. M. the second afternoon for third-morning placement or delivery to connections. Train 91 is due out of Croxton at 11:30 P. M. and is due in Chicago at 3:30 A. M. the third morning and it also makes connections with scheduled western line trains.

Q. Will that permit placement arrival at Chicago at 3:30 A. M., permit placement on consignee's spur track?

A. It is contemplated that the traffic moving into Chicago on train 91, the best placement at consignee's siding would be noon delivery but it does make early morning western connections.

Q. Does that include traffic moving as far as Arizona or California?

A. It does.

Q. Referring first to the eastward movements of the [fol. 1038] scheduled trains, can you say in what percentage of instances as related to the whole the deliveries or arrivals are made in accordance with schedule and in what percentage of instances you fail to make such arrival?

A. I can't give it to you in percentage but I can say that our arrival at our eastern termini in general has been very good. We are not necessarily faced with the same situation that western lines are on Chicago arrival because the predominating factor at the eastern seaboard is whether or not you make the market and we do have to at times perform what we call "fire alarm moves" in our New York terminals in order to get traffic that may have been delayed on a line on account of defects, or for some other reason in arriving later trains, getting them to market before they are shut out.

Q. What is the latest hour that you can put grapes or deciduous fruits into your New York terminal to make the market?

A. We have placed cars for display at Duane Street six hours after they arrive in Croxton yard. That involves the switching out of cars, the movement to the float bridges, the loading on floats, the towing across the river, and the unloading and displaying on the pier but you cannot go [fol. 1033] wrong when you do that.

Q. As to the performance in accordance with the westbound schedules, can you state the percentage of on-time as compared to the total?

A. I can say that our westbound schedules are at least 95 per cent on-time arrivals.

Q. Is there any penalty or possible penalty against your company for failure to comply with the eastbound schedules on perishables?

A. No, there are no penalties except if we miss the market as a result of some disability of our own we are faced with claims. We do not have a guarantee in the sense that the western lines do.

Q. You do have the possibility of claims in the event of your own failure?

A. That is right.

Q. Does the perishable traffic that you handle move to any extent in P. F. E. refrigerator cars?

A. Largely so.

Q. Will you say whether or not the Erie is relatively important in the handling of the eastbound perishable movement from western points of origin to New York City as compared to other carriers from the standpoint of volume?

A. It is considered the most important carrier of west perishable traffic in the New York area.

[fol. 1040] Q. From the standpoint of volume?

A. From the standpoint of volume.

Q. Do you know, and if so will you state what the relative volume of the New York and New Jersey traffic in perishables is handled by the Erie?

A. We handle about 95 per cent of the total.

Q. That is destined to New York and northern New Jersey cities?

A. New York and the metropolitan area.

Q. Mr. Randall, will you refer to a statement of one sheet bearing the designation "Erie Railroad Company, Typical Examples of Freight Trains Handled between Certain Terminals, August 1st to 10th, Inclusive, 1939." Have you that statement before you?

A. Yes, sir.

Mr. Mason: May we have this marked for identification?

The Clerk: Defendant's exhibit No. 81 for identification.

Mr. Mason:

Q. Did you prepare this exhibit or supervise its preparation?

A. The figures represented in this exhibit were prepared under my direction.

Q. From what sources were they taken?

A. They were taken from the wheel reports, conductors' wheel reports.

[fol. 1041] Q. Does that include the column headed, "Ruling Grade"?

A. The column headed "Ruling Grade" was taken from the condensed profiles of the railroads made by the chief engineer.

Q. Do the conductors' wheel reports include all of the information set forth on the exhibit as to each of the trains collectively shown here?

A. Yes, sir.

Q. Has the exhibit been checked against these original sources?

A. It has, and I personally checked certain items of it myself.

Q. As to the computations, have you checked those computations?

A. I have.

Q. Are those conductors' wheel reports and condensed profiles available in the courtroom for the examination of opposing counsel?

A. Yes, sir.

Q. Will you state whether the exhibit is a correct reproduction of the underlying sources of information according to your best knowledge and belief?

A. It is.

Q. Does it include local trains or only through trains? [fol. 1042]

A. It includes only through trains.

Q. Are the conductors' wheel reports from which this was made bound together in bound volumes or something like bound volumes?

A. The ones I have, ordinarily they are maintained in that condition, but the ones I have are separated by weeks I believe or days, I just can't recall.

Q. Do the volumes of wheel reports that you have here include the wheel reports for the local trains which are operated between these points or over these subdivisions for the period?

A. They only involve the trains represented on the exhibit.

Q. Who selected the period covered by this exhibit?

A. I selected the period.

Q. For what reason?

A. Because based on my knowledge of our operations it represents the average period in the year, neither a high nor a low period.

Q. Is this a period when perishable traffic is moving?

A. In ordinary values.

Q. Does the period August 1 to 10 precede or follow a [fol. 1043] period of heavy perishables?

A. It precedes.

Q. Does this showing include trains carrying other than perishables?

A. Yes, sir.

Q. Does it include trains returning empty refrigerator cars, for example?

A. Yes, sir.

Q. These mileages which are shown in the column headed "Total Distance (Miles)," do those in general indicate the distances between the terminal points of the subdivisions studied?

A. Yes, sir.

Q. Where there are two distances, for example, one of 33 and another of 35, what do those indicate?

A. That 33 miles covers the territory from Port Jervis to Maybrook, that is a part of the New York division but this is included here because it is the route over which we move our New England traffic from our last division point to the connection at Maybrook.

Q. Have you a copy of exhibit No. 55?

A. Yes, sir.

Q. Will you say whether or not the districts which are referred to on exhibit 81 for identification are the same [fol. 1044] districts shown in heavy black line on exhibit No. 55?

A. They are.

Q. Then exhibit No. 81 for identification covers the entire freight main line from Hammond to Croxton, does it?

A. Yes, sir.

Q. And the main line as well from Buffalo to Hornell?

A. Yes, sir.

Q. I believe you spoke of the Maybrook connection?

A. We have indicated the Maybrook connection on this map.

Mr. Mason: Have you any questions.

Mr. Strouss:

Q. This only covers through trains?

A. Through trains.

Q. Does it cover all through trains?

A. It covers all through trains during the period involved.

Q. During the ten-day period?

A. Yes, sir.

Q. Each wheel report simply covers that one train?

A. You will find that our wheel reports move over sometimes as many as three divisions. In other words, where [fol. 1045] there is no particular change in the make-up of the train one conductor will pass that wheel report to the next conductor and going through these records you will find in some instances one wheel report covers the movement of that train over three operating divisions.

Q. But that wheel report does not give any information as to any other train?

A. No, sir.

Q. Or as to what other trains may have been moving during that period?

A. No, sir.

Mr. Strauss: That is all the questions.

Mr. Mason: We offer the exhibit in evidence as defendant's exhibit No. 81.

Mr. Strauss: Same objection.

The Court: Same ruling, the objection is overruled and the exhibit admitted in evidence.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 81.")

Mr. Strauss: May I ask one more question. Your train sheets would show all train movements during that period?

A. That is right. When we selected this period we checked all the trains from the train sheets that were involved and then we pulled those wheel reports for those particular trains.

Q. You don't have the train sheets here?

A. I do not have the train sheets here.

Mr. Mason: All of the information shown on this exhibit is entirely taken from the wheel reports except of course as to ruling grade?

A. Yes, sir.

Mr. Mason: It should be understood, I should have stated previously, that the wheel reports referred to by the witness and of course the engineer's profiles are tendered to opposing counsel for their examination.

The Court: The record may so show.

Mr. Mason:

Q. Will you refer to a statement of one sheet bearing the title "Erie Railroad Company, Maximum Number of Cars

Handled in Various Main Line Passenger Trains during Period August 1st to 10th, 1939, Inclusive"?

A. Yes, sir.

Mr. Mason: May we have the statement just referred to marked No. 82 for identification.

The Clerk: Defendant's Exhibit No. 82 for identification.

Mr. Mason:

Q. Was exhibit No. 82 prepared by you or under your direction?

A. It was prepared under my direction.

[fol. 1047] Q. From what sources was it prepared?

A. Conductors' wheel reports.

Q. Do you maintain conductors' wheel reports covering passenger train operation which are similar in form to the reports of the freight train operation?

A. Yes, sir.

Q. Are the wheel reports from which this was taken available in the courtroom?

A. They are.

Q. Who selected the period August 1st to 10th, 1939, indicated on this exhibit?

A. I did.

Q. For what reason?

A. On our through-line passenger service there are not many fluctuations in traffic. Most of our fluctuations in the passenger traffic occur in our New York and Delaware division territory which are served only by local trains so inasmuch as we picked August 1st to 10th for the freight exhibit we chose the same period for the passenger exhibit.

Q. These are through long-distance passenger trains?

A. These are trains that operate between Jersey City and Chicago and Jersey City and Cleveland.

Q. What is the "Midlander"?

[fol. 1048] A. The Midlander is represented on here between Chicago and Salamanca. At the time this study was made we split our train No. 5 at Salamanca which is normally a Cleveland train and operated from Salamanca to Chicago.

Q. Will you say whether or not the passenger train showing on this exhibit is fairly representative of your passenger train operation?

A. It is.

Q. That is your passenger train operation between your eastern terminals and your western terminals?

A. It is.

Q. This does not include any reference to your suburban passenger service in northern New Jersey?

A. No, sir.

Q. Has the exhibit been checked against the wheel reports to determine whether it is correct?

A. It has.

Q. Will you say whether in your opinion it is true and correct?

A. To the best of my judgment it is correct.

Mr. Mason: Have you any questions, Mr. Strouss?

Mr. Strouss: This does not purport to show the number of cars that were in a train a continuous distance from Chicago to New York or New York to Chicago but at some [fol. 1049] point during the trip?

A. That is right.

Mr. Mason: Mr. Randall, do you have many setouts or pick-ups of cars at intermediate points on these passenger train runs?

A. We operate trains between Jersey City and Hornell at which point certain equipment is taken out for further operation to Buffalo.

Q. Which train would that be?

A. That would be train No. 1 and No. 3 and train No. 5 and No. 6. Those trains are for combination Chicago and Buffalo connections from Jersey City to Hornell.

The Court: Following Mr. Strouss' question, are the figures shown here the maximum?

A. The maximum at any one time.

Mr. Mason:

Q. That is as the total indicates?

A. Yes, sir.

Mr. Mason: We offer the exhibit in evidence as No. 82.

Mr. Strouss: Same objection.

The Court: Objection overruled, it may be admitted.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 82.")

[fol. 1050] The Court: If I understand you, Mr. Randall, all the books and records from which this data was procured are here in the courtroom.

A. Yes, sir.

Mr. Mason: The underlying records are likewise tendered for the examination of opposing counsel.

Mr. Strouss: Of course, you did with this exhibit the same as with the freight, you went to the train sheets first to get the information and to the wheel reports?

A. Well, these are our regular daily scheduled trains as represented on any one of our time tables. Those are the only ones we have. We didn't have to do any checking against train sheets to determine that in this case.

Mr. Mason: I take it there is no objection on the ground that the train sheets are not present in the court room, is there, Mr. Strouss?

Mr. Strouss: On the freight train movement, I certainly think we should have it.

Mr. Mason: Well, the witness testified that there is no information on the exhibit taken from the train sheet.

Mr. Strouss: That will be argued when we get to it, I think.

Mr. Mason: I notice, Mr. Randall, that the exhibit indicates that you did on several occasions operate trains consisting of fifteen, sixteen, seventeen or more cars, and you say that is typical of the operation throughout the year?

A. Yes, sir.

[fol. 1051] Q. Do you know of any difficulty encountered by the Erie in heating the rear cars of any trains of fifteen or more cars during the winter season?

A. We have had no difficulties.

Q. You operate the line which parallels the Great Lakes and then runs along the boundaries between Pennsylvania and New York as the map shows?

A. Yes, sir.

Q. Do you ever encounter severe weather in that locality?

A. Yes, sir.

Q. There has been some there during the last week, hasn't there?

A. That is right.

Q: Temperatures sometimes go well below zero, do they not?

A. Yes, sir.

Mr. Strouss: Is that from your own information during this past week, Mr. Randall?

A. No, sir, from the newspapers and the radio.

Mr. Mason: Will you say, Mr. Randall, whether your [fol. 1052] passenger trains experienced any difficulty in making schedules when they are longer than fourteen cars?

A. No, sir, we haven't met with any difficulty as a result of that condition.

Q. Does your last statement apply equally to all seasons of the year?

A. I might say that during severe weather periods we have to double-head these trains at times in order to make the schedule.

Mr. Mason: I think that is all. Thank you, Mr. Randall.

Cross-examination.

By Mr. Strouss:

Q. Mr. Randall, your line has been doing quite a bit of improvement in the track and road bed by cuts and fills to eliminate dips and rises?

A. Yes, we have done quite a lot of that type of improvement.

Q. As a matter of fact, your system, practically all the way through, you have eliminated dips and hills?

A. Except on the Kent and Mahoning Divisions.

Q. Where is the Mahoning Division?

[fol. 1053] A. From Meadville to Kent.

Q. That is over territory from Western Pennsylvania through Ohio?

A. It is a rolling country and we have quite a lot of so-called hogbacks in that territory.

Q. They are all gradual, not sharp dips?

A. No, with the exception of the one grade on the Kent Division known as Wadsworth Hill, which is about five miles in length and the maximum grade is about 1.2 per cent.

Q. That is on which division?

A. The Kent division.

Q. Through Meadville, is it?

A. Meadville east to Susquehanna our railroad is fairly level.

Q. You have improved operations through that territory by cuts and fills?

A. We have improved the grade.

Q. That is practically a smooth and even operation?

A. Except from Waterboro to Randallville where we have a grade of approximately 0.7 per cent.

Q. Shenango, that is a junction?

A. That is a junction with the B. & L. E. Railroad, and we cross the Pennsylvania also.

Q. And that is where a part of the single track operation is?

A. Yes; prior to 1937 we used to operate our westbound trains from Meadville to Shenango over the B. & L. E. Railroad. Since 1937 we have operated both directions over our own lines between Shenango and Meadville.

Q. Did you testify there was remote control between Shenango and Buchanan?

A. Yes; we have two long passing tracks, one at Atlantic, Pennsylvania, and one at Stony Point. One end of each of these passing tracks is operated by remote control by the operator on the other end.

Q. And that is on this single track part?

A. Yes, sir.

Q. A witness yesterday testified that he had been given these exhibits 2, 3, 4, 5, and 6 when they were prepared. Were you also given those exhibits at that time?

A. Yes, sir.

Q. Then in comparing the comparison of cars and locomotives, did you go to your records to get that information using those exhibits or copies of those exhibits?

A. I went to records that are maintained by the Superintendent of the car department, covering the changes in [fol. 1053] construction in our type of cars.

Q. Your testimony here as to the similarity is the information you have procured when you examined those records?

A. Yes, sir.

Q. You say you never have any difficulty in making your schedules with long passenger trains. Of course, your

schedules anticipate operation of trains of that length, wouldn't that be a fact, Mr. Randall?

A. Yes, the schedules are devised based on the obligations the train has.

Q. Do you have a train going into Cincinnati from New York?

A. No, sir, no more. We used to, but we have abandoned that service.

Q. Of course, it is quite a congested district both coming into New York and coming into Chicago?

A. Yes, sir.

Q. That your trains operate through?

A. Yes, sir.

Q. You spoke yesterday about your hauling of coal. What is the length of the coal cars that you use on your system.

A. Well, we have various types; we have 50-ton cars, we have 70-ton cars. The 50-ton cars are approximately [fol. 1056] forty feet in length; the 70-ton cars are around forty-six feet in length.

Mr. Strouss: That is all.

Re-direct examination.

By Mr. Mason:

Q. Do the hogbacks and dips that you have spoken of, cause you to limit the lengths of trains in the districts where they are encountered?

A. Yes; The Kent and Mahoning Districts are the two low-tonnage divisions on our railroad.

Q. Do you observe any precise limit of train lengths in those divisions?

A. Only controlled, as it would be, by the tonnage the locomotive is specified to handle over those divisions.

Q. Then the size of the tonnage is a tonnage size and not a size determined by number of cars?

A. Yes, sir.

Q. And that in turn is determined by the tonnage rating of the locomotive?

A. Yes, sir.

Q. If a larger locomotive was placed in service there, the tonnage would be greater?

A. Yes, sir.

Q. Is there any rule on those Divisions or on any other [fol. 1057] part of the system as to the maximum number of cars that may be placed in a freight train?

A. No such rule.

Q. In connection with the question as to the design of cars, you were asked whether you referred to the records, I will ask you whether in your experience as yard master, general yard master and as a supervising officer of the higher rank, you have an opportunity to observe and have observed the box cars and locomotives operated by the Erie?

A. For a good many years, yes, sir.

Q. And at rather close range?

A. Yes, sir.

Q. That is necessarily a part of the duties of yard master and Assistant Superintendent and Terminal Superintendent, is it not?

A. That is right.

Q. Can you say whether, independently of any examination of records in the motive power department, the development of cars and locomotives shown on the defendant's exhibits referred to has been along the same lines as the development of the Erie equipment?

A. Generally speaking, yes, sir.

Q. Does your Exhibit 81 show any trains on the Kent [fol. 1058] or Mahoning Divisions?

A. Yes, sir.

Q. On what lines?

A. Line 31, line 32, on the Mahoning Division; line 35, 36, 37 and 38 on the Kent Division.

Q. Now, on the Mahoning Division, if I read the exhibit correctly, line 31 indicates that the maximum train operated during the ten-day period between Kent and Meadville east was 109 cars; is that correct?

A. Yes, sir.

Q. And on the Kent Division, line 35, indicates that the maximum train operated between Marion and Kent, Ohio, eastward during the ten-day period stated was 129 cars; is that correct?

A. That is right. Very likely in both those instances those were double-header trains.

Q. Is the eastward direction the direction of the heavier traffic?

A. It is the direction of the heavier traffic; but the grades are about the same in both directions on those two divisions.

Mr. Mason: I think that is all. Do you desire Mr. Randall recalled for further cross-examination?

Mr. Strouss: I would like to see the records.

The Court: The court will be at recess.

[fol. 1059] Thereupon a short recess was taken, after which proceedings were resumed as follows:)

The Court: You had finished with Mr. Randall and you are reserving the right to further cross-examine him?

Mr. Strouss: Yes.

Mr. Mason: We will recall Mr. C. R. Young for further cross-examination. Your honor will recall that yesterday Mr. Young was cross-examined and at that time it was suggested that a check be made of certain information which Mr. Strouss and his assistants had developed from the train sheet, Mr. Young's Exhibit No. 30.

The Court: Yes, I recall.

Mr. Mason: Do you want to proceed with your questioning of Mr. Young?

Mr. Strouss: Yes.

C. R. Young was recalled to the stand and testified further as follows:

Cross-examination (Continued).

By Mr. Strouss:

Q. You checked the train sheets as to broken knuckles and pulled draw bars?

A. Yes, sir, I made a joint check with your representative. [fol. 1060]

Q. I believe the result, there were seven trains, a total of seven trains?

A. No, there was a total of ten trains, nine trains on which the train sheet record of the movement of the trains showed that a draw bar had been pulled out or a knuckle had been broken, and one train which had become separated between the 20th and 21st car behind the engine. The train sheet didn't show whether that separation was brought about by a draw bar pulled or knuckle breaking, or whether

someone had stepped on the cut-lever. Of those ten, there are five of them that were over seventy cars in length and four were seventy cars or less, and the one train which became separated behind the 20th car behind the engine was over seventy cars in length.

Q. Are these all on the Illinois Division?

A. Those trains which were checked, totalling 721 freight trains, were all on the Illinois Division. That is the first division out of Chicago.

Q. I mean the trains you have just referred to?

A. That is true, all on the Illinois Division.

Q. Will you read into the record the number of each train and the number of cars?

A. Yes. On April 10th, No. 27, Engine 2513, with 94 [fol. 1061] cars and a caboose was delayed thirty minutes, Manteno, Illinois, because of a broken knuckle. On the same date, April 10th, No. 21, Engine 2509, with 38 loads and the caboose was delayed thirty-seven minutes at Kankakee because of the draw head breaking off. On—

Mr. Mason: Just a moment, Mr. Young. You say thirty-eight loads and the caboose. Is that the entire consist of that train?

A. That is true, thirty-eight loads behind the engine, and the caboose. On April 13th, Extra 2503, with 96 cars between the engine and caboose, was delayed 25 minutes at Greendale because of a broken knuckle. On the same date, April 13th, Extra 2505 with 139 cars between the engine and caboose broke in two at Leverette behind the 20th car from the engine. That is the case I have described, the record not showing whether the separation was due to a broken bar, draw bar, or whether someone had stepped on the cut-lever. On April 13th, Extra 2112, with seventy cars between the engine and caboose was delayed at Richton 30 minutes because of the draw bar pulling out from the 50th car from the engine. On April 15th, No. 76, Engine 2518 with seventy-three between the engine and caboose was delayed 30 minutes at Gilman because of a broken [fol. 1062] knuckle. On April 18th, No. 78, Engine 1414 with fifty-two cars between the engine and caboose, was delayed at Gilman 25 minutes because of a broken draw bar. On April 18th, Extra 2507 with forty-two cars between the engine and caboose was delayed at Paxton two hours and

fifty-five minutes because of a broken knuckle and letting other trains pass on account of that delay. On April 19th, Extra 2512 with eighty-three cars between the engine and caboose, was delayed — Kankakee 30 minutes because of a broken knuckle. On April 20th, Extra 2506 with 90 cars between the engine and caboose was delayed 30 minutes at Dorano because of a broken knuckle. That is all of the specific cases that we find on the train sheets.

Mr. Strouss: No further questions.

Redirect examination.

By Mr. Mason:

Q. Mr. Young, is it customary on the Illinois Central to enter on the train sheets any injuries to persons, particularly members of the train crew, which may take place because of a broken knuckle or other incident of the kind?

A. Yes, sir, where any particular member of the train crew is injured in some occurrence such as we have been [fol. 1063] describing, the dispatcher makes a notation giving the name of the employee who may have been injured if the conductor reports the injury resulting from that occurrence.

Q. Do the train sheets which you have checked contain any notations of injuries to employees by reason of the occurrences you have described?

A. There were no notations on the sheets which we checked of that nature.

Q. How many trains on the Illinois Division did you check in developing these various occurrences that you have recited?

A. 721.

Q. From your experience will you describe what is necessary to be done in order to resume operation of the train when a knuckle is broken?

A. Well, when a knuckle is broken, ordinarily there is an emergency, what we call an emergency knuckle carried on the caboose and another one carried on the engine, and that knuckle may — placed in the draw head, replacing the one which has broken, and the train may proceed.

Q. Is the job of replacing the broken knuckle a repair job performed by the brakemen and conductor?

A. Yes.

Q. Readily performed by them normally?
[fol. 1064] A. Yes.

Q. You indicate that the delays there were on the average of 30 minutes, excepting in one case?

A. Yes, there were a few as slight as 25 minutes.

Q. That delay would include the time to get the train in the clear and couple up the knuckle as well, would it?

A. In these instances where the delays were only 25, 30 or 40 minutes, the train was not put in the clear, the knuckle was replaced where the train stood. In some instances the cars were set out. This delay of 2 hours and 55 minutes was an accumulated delay because of this particular train not being able to proceed to the next passing track to clear a first-class passenger train, it did have to get in the clear for the passenger train, and the accumulated delay was 2 hours and 55 minutes.

The Court: Mr. Young, would the breaking of a knuckle, such as you have referred to necessarily result in the parting of the train?

A. Ordinarily yes, your honor.

Q. Would that ordinarily occur when the train is in motion?

A. Sometimes it occurs when the train is in motion and sometimes the knuckle is broken in making the coupling [fol. 1065] where a car has been placed in the train or taken out of the train and the two cars come together, may have broken one of the knuckles.

Mr. Mason: Mr. Young, can you describe the knuckle briefly? What part of the coupler is that?

A. It is rather difficult to explain. A draw head looks something like a man's hand. As the two draw heads come together the knuckle, which is the forward part of the draw head, the two knuckles pass and then grip one with the other and it is the knuckle or the face of the draw head which generally breaks. Sometimes a draw head may break back in what we call the shank. That might correspond with a man's wrist.

Q. The knuckle is the movable part of the end of the coupler which functions in making the coupling between the two cars, is it?

A. That is true.

Q. It is hinged so that it rotates as part of the job of coupling or uncoupling?

A. That is correct, and the lift-lever which I referred to in one of these instances, or cut-lever, is a rod which is connected with the pin which holds the knuckle in the draw head, and that rod extends out to the side of the car so that the coupler may be released by a train employee alongside [fol. 1066] the car without having to go between the cars.

Q. Now, you spoke of possible breaking in two by stepping on the cut-lever. How does that happen?

A. Frequently trespassers riding on trains between the cars or others climbing between the cars, in stepping from the end of the car will step on the lever, on the outside end of the lever, which would depress it and pull the pin which releases the knuckle and lets it straighten out and permits the cars to separate.

The Court: Then is the breaking of a knuckle a common occurrence or uncommon?

A. It is somewhat common, your Honor. They occur in the operation out on the main line and very frequently in the yard when cars are being switched.

Q. Well, Mr. Young, if I don't properly ask this question it is because of my ignorance of railroad operations. Isn't there an air-hose connection, too, between the cars?

A. Yes, sir.

Q. When the knuckle broke, that would necessarily break your air connection there?

A. And that would apply the brakes and stop the train.

Q. Automatically?

[fol. 1067] A. Yes; where the train is moving and the air hose or air connections have been coupled up.

Q. How about that segment of the train that was parted from the engine, would it be automatically stopped?

A. Yes, sir; the pressure which is maintained in the air hose that applies the brakes on either end of the train and that stops it automatically.

Mr. Mason: That is all.

Recross-examination.

By Mr. Strouss:

Q. These 721 trains, Mr. Young, in computing that you counted a train for each division that it operated in?

A. Yes sir, that was the same manner in which Exhibit 30 was made up. These trains which we checked covered the first four blocks in the trains shown in Exhibit 30.

The Court: Any further questions?

Mr. Strauss: That is all.

Mr. Mason: That is all.

The Court: May this witness be excused with his books and records?

Mr. Strauss: Yes.

The Court: Do you desire to call Mr. Fertig for cross [fol. 1068] examination?

Mr. Strauss: Yes.

The Court: Come forward, Mr. Fertig.

H. R. FERTIG was recalled to the stand and testified further as follows:

Cross-examination (Continued):

By Mr. Strauss:

Q. Mr. Fertig, your system is double-tracked how far west of Chicago toward El Paso?

A. We have a mileage of 1,137 from Chicago to Tucumcari, New Mexico, which is the farthest point west that we operate. Of that 1,137 miles, about 700 miles is double track and 400 miles is single track. The double track is not continuous out of Chicago, but the total mileage is that amount, approximately.

Q. I take it from your testimony of yesterday that there is a considerably greater volume of traffic between Kansas City and Chicago than there is west of Kansas City?

A. Well, I would say yes, on account of the diverging trains which come into the main line at Silvis Terminal, Illinois.

Q. Is it a fact that even west of Kansas City for a short [fol. 1069] way the traffic would be more dense?

A. Over the 147-mile subdivision between Kansas City and Herington, it carries the traffic of the Texas lines and the Tucumcari line and also that portion of the Denver line coming into the main line at McFarland, Kansas. That territory is double-tracked.

Q. In your testimony yesterday you testified concerning the consolidation of trains at Dalhart and testifying concerning the changing of locomotives you stated that when you have a solid train you have but one engine to service at the terminal, where when you have two sections of this train you have two or three engines to serve, so that by the time the third section has finally left the terminal it tends to lose time instead of making up time, as compared with the heavy train?

A. That is true.

Q. If three trains of seventy cars were to come into Dalhart, you wouldn't consolidate that into one train of 210 cars, would you, Mr. Fertig?

A. No, not at Dalhart. The reference I made to that operation of the long train was after the trains had been consolidated at Dalhart and not the three trains coming in from Tucumanari over that 93 miles of heavy grade line where consolidation is not possible.

[fol. 1070] Q. The point I am trying to make is that you would not consolidate three trains into one but it would be at the most into two?

A. Yes, that is the usual practice at Dalhart.

Q. So that you wouldn't eliminate two locomotives but only one?

A. At Dalhart, but carrying the picture on further to Liberal, Kansas, and Pratt, Kansas, the two terminals through which the consolidated train would be operated, we would at those points eliminate the extra engine or the third engine when it is two or three trains respectively.

Q. Of course it is a fact that an engine can pull a train of 75 cars faster than it can a train of 125 cars?

A. Well, all things being equal we would say he could pull the train faster but whether he would pull the train faster over an extended territory is the question. If you kept him between the terminals that no doubt would be true.

Q. In your testimony you have testified that you have been furnished with copies of defendant's exhibits 2, 3, 4, 5, and 6 at the time they were prepared. Did you then compare those exhibits and the information there shown with the records of your company to procure the information testified to here yesterday by you with respect to similar [fol. 1071]ity of equipment?

A. To the extent of my answer to the direct question, that the general improvement in our equipment measured

up to the improvements pictured in the sketches, I did that thing. I conferred with our representatives of the mechanical departments, both covering equipment and power and satisfied myself that my general knowledge of the situation was relatively correct.

Q. You testified as to the number of cars of perishables handled through Tucumcari in 1939, 43,000 cars I believe you testified?

A. Yes, sir.

Q. And that to date there were 42,500 cars, that of course was information that you procured from the records of your company?

A. That was information that is a matter of public record, taken from the interchange of traffic as between the Southern Pacific and Rock Island at Tucumcari, New Mexico, which is a joint terminal and station and the Southern Pacific records are the records of the Rock Island railroad as to the interchange because the interchange is automatic on the arrival of the train.

Q. You were testifying as to information you took from [fol. 1072] those records?

A. Yes, in the form of daily telegraph reports which we receive in our office in Chicago and which are made a part of a daily 7 A. M. situation report to the executive officers of the railroad.

Mr. Strouss: That is all.

Re-direct examination

By Mr. Mason:

Q. The information of the volume of traffic interchanged between the Southern Pacific and your company at Tucumcari is information that comes to you as assistant superintendent of transportation in the ordinary course of your duties?

A. That is true, we get the reports daily.

Q. Is that necessary information to you for the performance of your duties?

A. Yes, the record is very essential in order that we may properly carry out the distribution of the equipment and keeping the shipping and receiving public advised of the movement of their traffic over our line.

Q. Mr. Strouss asked you whether a locomotive could pull a 70-car train faster than it could pull a train of 125 cars. I assume in answering his question you had in mind that the same locomotive would be used for a 70 car train [fol. 1073] that would be used for the longer and heavier train, did you?

A. Yes, sir, the engine of the two trains would be identical or the comparison would not be fair.

Q. As a matter of fact, in practical operation if you have 125 cars to pull over a particular territory and you also have, let us say, 70 cars of equivalent loading to pull, you will use a heavier locomotive to the 125 train than you will to the 70 car train if both types are available?

A. We would, if that were necessary, but in actual operation on account of the way the trains come, the engine which handles 75 cars is only performing about 60 per cent of its efficiency, while if we had 125 cars the same engine would handle those cars at the same speed approximately that he would the ordinary train.

Q. Is the problem of the company the problem of moving one 70-car train at a particular speed and over a particular district or moving a 125-car train over a particular district, or is it not instead the movement of all of the traffic over the district in the most convenient and most efficient units possible?

A. That is true. The whole is the important thing and for that reason if we can have a train of 125 cars we can get [fol. 1074] that train across the single track territory more efficiently than we can two trains of a lesser number of cars for the reason that the opposing traffic can be controlled to a better extent against the longer train than it can against the short train and I would like to illustrate that by saying that on our eastbound fruit trains which operate on a fast schedule it is often possible to give them a preference movement over even a westbound passenger train, and that the delay to the westbound passenger train or the expedited freight train meeting 125 cars will not be as great as having to meet two trains of a lesser length, and while the delay to the westbound train may be a result of meeting a long train we cannot carry that process on indefinitely with more eastern bound trains or we will have our westbound schedules so out of balance that we will lose more than we gain. We find that a fact on our single track operation.

Q. Suppose in stead of having one 70-car train to move as against 125 cars as supposed by Mr. Strouss, you have 210 cars altogether to be moved from Terminal A to Terminal B. Will that traffic in your experience be delivered at Terminal B more quickly if it is moved in three 70-car trains [fol. 1075] or two 105-car trains?

A. The preferable movement would be the two long trains because of the reduction in the number of operating interferences the second train would encounter as between the second and third train with the three trains.

Q. Would you be able with your motive power to pull these two 105-car trains along the rails at approximately the same maximum speed as you would the 70-car trains?

A. Approximately the same speed, taking into consideration the territory over which the trains were operating. I will say that our trains out of Dalhart, Texas, and Herington, Kansas, which is entirely a single-track operation, the consolidated fruit trains make better arrivals at Herington and Kansas City than do the lesser trains. In other words, during the peak business when we have an extensive volume of perishable freight moving through the Tucumcari gateway and can make the consolidations, the general performance of the perishable freight is better than during the lighter periods of the year when we only have two and sometimes three trains a day across that territory.

Mr. Mason: That is all.

The Court: May this witness be excused?

[fol. 1076] Mr. Strouss: Yes.

The Court: You may be excused, Mr. Fertig.

W. R. TRIEM was called as a witness in behalf of the defendant and being first duly sworn testified as follows:

Direct examination.

By Mr. Masoff:

Q. Will you please state your name and residence to the reporter?

A. W. R. Triem, residence Philadelphia, Pennsylvania.

Q. In what position are you employed by the Pennsylvania Railroad Company?

A. General superintendent of telegraph, reporting to the chief of freight transportation system.

Q. How long have you been general superintendent of telegraph?

A. About four years.

Q. What has been your railroad experience?

A. I have been employed on the Pennsylvania Railroad continuously for thirty years and prior to that time, during summer vacations, I worked on a coal mine branch of the Pennsylvania in Ohio for five years. My experience has [fol. 1077] been: After graduating from Ohio State University as a civil engineer I was employed in various engineering capacities from 1910 to 1918, at which time I was appointed assistant division engineer at Akron, Ohio, serving on that division and on the Logansport division, Logansport, Indiana, as assistant division engineer; in 1924 I was appointed assistant trainmaster at Toledo, Ohio, and served in that capacity on the Toledo division and on the Pittsburgh division on the western slope of the Allegheny Mountains until 1926, when I was made trainmaster on the Renovo division at Erie, Pennsylvania, and served as trainmaster on that division and on the Panhandle division which extends from Pittsburgh to Columbus, Ohio, until 1927, when I was appointed superintendent of the Buffalo Division at Buffalo, New York. From 1928 to 1933 I was superintendent of freight transportation of the Central Region of the Pennsylvania at Pittsburgh, from 1933 to 1936 superintendent of the Monongahela division at Pittsburgh and from 1936 to date as general superintendent of telegraph.

Q. In your position as trainmaster and superintendent [fol. 1078] you were of course a division officer in charge of operations or assisting in the supervision of operations upon the several divisions you have described?

A. That is correct.

Q. As superintendent of freight transportation what were your duties in general?

A. As superintendent of freight transportation on the Central Region which extends from Altoona and Renovo on the east to Crestline and Columbus, Ohio, on the west, I reported to the general manager and had charge of all matters pertaining to freight train operations such as dis-

tribution of cars, the assignment of locomotives, the fixing of train schedules, and such other similar matters.

Q. Is the office of the superintendent of freight transportation concerned in any respect with the details of freight operation?

A. Yes; it is concerned with the details of freight operation and constant contact is maintained with the division organizations, both the superintendents and the division trainmasters.

Q. Have you previously seen a copy of defendant's exhibit No. 66?

A. Yes, I have a copy before me.

Q. Will you state whether or not that is a reasonably [fol. 1079] accurate outline map of the Pennsylvania Railroad system and of the territory in which it operates?

A. Yes, it is reasonably accurate except there is a typographical mistake made with respect to the stations shown as "Lake Charles" which happens to be "Cape Charles" shown on the lower righthand corner of the map.

Mr. Mason: May we have the record show the name of the station correctly to be "Cape Charles"?

The Court: The record may be corrected.

Mr. Mason: Q. The significance of the heavy black lines will be explained later in connection with an exhibit you propose to offer?

A. Yes, sir.

Mr. Mason: We offer the map in evidence as defendant's exhibit No. 66.

Mr. Strouss: Same objection.

The Court: Same ruling, the court will overrule the objection and admit the exhibit in evidence.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 66.")

Mr. Mason: As general superintendent of telegraph you are an officer of the entire Pennsylvania system?

[fol. 1080] A. That is correct.

Q. Did you state the name of the officer to whom you report?

A. I report to the chief of freight transportation, John C. Rill.

Q. Will you state generally what the duties of the general superintendent of telegraph are as performed by you?

A. I have been assigned by the chief of freight transportation a number of what might be considered extraneous duties beyond those prescribed for the general superintendent of telegraph. So far as the duties of the general superintendent of telegraph are concerned, they consist principally of inspecting and insuring that the telephone and telegraph facilities of the Pennsylvania Railroad are maintained according to standards and prescribed methods and it is my responsibility to issue those standards and specifications. In addition, I am the chairman of a so-called system train rules committee which has charge of the operating and signal rules of the Pennsylvania Railroad and through that organization I have considerable to do with the signalling system of the Pennsylvania, working with the signal department as to rules and methods of operation and [fol. 1081] checking all requests for authority and installations of signal systems.

Q. Do you make special studies or investigations as instructed by the chief of transportation?

A. Yes.

Q. Do those investigations and studies carry you over all parts of the system?

A. Yes, those investigations together with other work, have involved visits and inspections at all regional general divisions and divisional headquarters on the system at least once a year for the past four years.

Q. Do you visit the important terminals and yards?

A. Yes, quite frequently.

Q. Do you ever have occasion to visit the dispatchers' offices or examine their records?

A. That is one of my duties. I am in dispatchers' offices looking over dispatching records almost constantly.

Q. What is the total mileage of the Pennsylvania?

A. The total mileage of the Pennsylvania is about 10,000 miles, that is road mileage; the track mileage is about 25,000 miles.

Q. What is the distinction between road mileage and track mileage?

[fol. 1082] A. Road mileage is the right of way mileage or what is commonly thought of as the first main track. That is the entire length of railroad and when I say "all track

mileage" I am including in that some 10,000 miles of side tracks in addition to the main track mileage.

Q. Is the Pennsylvania Railroad system divided into regions, I believe you mentioned you were superintendent of freight transportation at Pittsburgh?

A. Yes, the Pennsylvania is divided into three regions and New York zone. Those regions and zones are under the immediate supervision of a regional vice-president and a general manager.

Q. And your jurisdiction as superintendent of freight transportation at Pittsburgh included which regions?

A. The central region with headquarters at Pittsburgh.

Q. And extending I think you said from Altoona on the east to Crestline on the west?

A. That is right.

Q. Is the region east of Altoona known as the eastern region?

A. The region east of Altoona is known as the eastern [fol. 1083] region and extends east to the junction with the New York division which is just north and east of Philadelphia.

Q. Where are the headquarters of the eastern region?

A. At Philadelphia.

Q. Those are also the system headquarters?

A. Those are also the system headquarters.

Q. The western region has its headquarters where?

A. At Chicago.

Q. And includes what lines?

A. Includes all lines west of Crestline and Columbus.

Q. Is there any mountainous territory in the central region over which you had jurisdiction when stationed at Pittsburgh?

A. Yes, the Allegheny Mountains cross the central region from Lake Erie southeast and all divisions east and west, including the Buffalo, part of the Reno, the Williamsport, and the Pittsburgh division cross or have lines in those mountains.

Q. When you were superintendent at Pittsburgh, did your jurisdiction include any of the mountainous territory you have just referred to?

A. No, my territory extended along the Monongahela [fol. 1084] River and was entirely in the coal territory and the foothills of the Allegheny Mountains.

[fol. 1085] Q Were you ever a Division officer in this mountainous territory?

A. Yes, I was superintendent of the Buffalo Division and trainmaster of the Renovo Division.

Q. You spoke of your membership on the System Committee dealing with operating and signaling rules. Are you familiar with the standard code of rules of the Association of American Railroads?

A. Yes, I am.

Q. Does the code of rules of the Pennsylvania bear any resemblance to that standard code?

A. It is based upon the standard code—the Pennsylvania Book of Rules is based upon the standard code and differs from it only to the extent necessary to cover conditions that are peculiar to the Pennsylvania Road.

Q. I take it that your main line is largely, if not entirely, equipped with block signals?

A. Yes, our main lines are entirely equipped with block signals?

Q. Do you have any helper districts in the mountainous territory that you have spoken of?

A. Yes, there are helper districts on a number of divisions in the central region. There are helpers used over the mountains on the Buffalo Division, on the Renovo Division [fol. 1086] and on the Pittsburgh Division, and then on the Eastern and Panhandle Divisions which extend west from Pittsburgh across the State of Ohio we have helper districts for movements in both directions out in that territory.

Q. Have you become, in the course of your experience as an officer of the Pennsylvania Railroad, familiar with the rolling equipment owned and used by the Pennsylvania?

A. Yes, I think I have.

Q. Is that a necessary part of the knowledge required in your position as superintendent of freight transportation?

A. Yes, it was.

Q. And as a Division Superintendent?

A. As a Division Superintendent.

Q. Have you seen, or been furnished with, copies of Defendant's Exhibits 2, 3, 4, 5, and 6?

The Court: Mr. Mason, before you go into this new matter, it is so near the noon hour that we might defer that. There are two matters that the court would like to take up

at this time with counsel, so we may be ready to leave at four o'clock this afternoon. The first is, I indicated at the beginning of the week, our sessions of this week, that I was of the [fol. 1087] opinion, that certain exhibits had been erroneously admitted in evidence, and the Court indicated that on its own motion it was going to strike these exhibits. At that time counsel indicated that you were going to supply the books and records, and so the Court didn't make the ruling then. In order that there will be no misunderstanding, I at least at this time want to indicate that I have reference particularly to Exhibits 11 and 12, which were admitted in evidence in connection with the testimony of the witness, Mr. Porter, of the New York Central; also, Exhibit No. 13, which was admitted during the time that Mr. Wright, of the New York Central, was testifying and Exhibit No. 26 of the Missouri Pacific, which was introduced in connection with the testimony of Mr. Kirk. Now, unless there is an avowal that these records from which these exhibits were taken will be produced, the Court intends before recessing tonight to strike these exhibits from the file, together with all testimony that was wholly predicated upon these exhibits. I might say in passing, as I recall the record, even the books and records of the Southern Pacific, the defendant here, were not produced when Mr. Russell was on the stand, and there was admitted Exhibits 3 and 7, which appear to be [fol. 1088] statistical information taken from the books and records of the Southern Pacific. I wanted to make the Court's position clear on this matter so there will be no later misunderstanding. Now, unless there is an avowal that these records are going to be produced, the Court might as well enter that order at this time.

Mr. Booth: As to Exhibits 11 and 12 of the New York Central, we will undertake to have either Mr. Porter return with the underlying data which is the same as the underlying data for the other exhibits introduced by statisticians for other railroads, or we will have someone of equal qualifications appear with the same books and records. As to Exhibit 13, we will undertake to have either Mr. Wright return, or someone of equal qualifications, the underlying, either the train sheets or the conductor's wheel reports, and the accompanying collateral data to establish that exhibit. As to the portions of Mr. Wright's testimony referring to that exhibit, your Honor may recall they were somewhat interwoven.

The Court: Yes, that is true, and it will be a little difficult to draw the line of demarcation. You will notice that I said such portions of his testimony as was predicated upon these exhibits would be stricken. I recognize the fact, that [fol. 1089] these gentlemen, Mr. Wright and Mr. Porter, as well as the others who testified, have, by reason of their many years of railroad experience, gained certain information which unquestionably they have a right to testify to independent of any records, but you did see fit to introduce here certain specific exhibits which contain a lot of statistical data and the underlying books and records, the original source material from which they were taken were not produced.

Mr. Booth: I may say frankly that we are extremely anxious that this case be submitted to the Court on a record to which no exception can reasonably be taken on the ground of incompetency. It is a case that will take a long time to try. It is a very important case, and if, at the conclusion of the case, and after argument and consideration of the case, we should be so fortunate as to obtain a judgment, we want one that will be reasonably sure to be sustained on a possible appeal, and for that reason we are using every effort to comply with the ruling of the Court, as the Court has indicated from time to time on these evidentiary matters and it has culminated in the Court's statement today. As to Mr. Kirk's exhibit, I have forgotten the number, No. 26, we will undertake to have that exhibit made competent either by [fol. 1090] Mr. Kirk's testimony or by the testimony of someone of equal qualifications, so far as that exhibit is concerned, presenting for the inspection and use of counsel the underlying data for the exhibit.

The Court: Then, in effect, you are asking the Court to defer its ruling at this time on striking from the record these particular exhibits, on the Court's own motion?

Mr. Booth: I am. Mr. Mason will discuss the Southern Pacific exhibits.

Mr. Mason: As to Exhibit No. 3, the witness offered the exhibit as having been taken from the records of the company, I think that is correct. However, when the exhibit was offered, Mr. Strouss said, and I am reading from page 65 of the transcript of the first day's proceedings, that he had no objection. There was no objection made then on the ground of lack of record, and that was an express statement

of his. As to Exhibit No. 7, that was shown as having been taken from the Southern Pacific Company's own records, and when it was offered, no objection was made. There was no express statement but the Court made its ruling admitting it in evidence.

The Court: I merely indicated as yet I didn't recall that [fol. 1091] any of the books and records of the Southern Pacific had been produced.

Mr. Strouss: I might say, in a number of respects when I have indicated records that I have desired they have already been furnished to me before the trial started.

The Court: Then as to these two particular exhibits, there were no objections to them. At least, on the ground that you based your other objections on.

Mr. Strouss: No, that is true.

The Court: Then you have satisfied me as far as Exhibits 3 and 7 are concerned.

Mr. Strouss: I want the Court to understand that with respect to Southern Pacific records, they have been very kind in giving me anything I have asked for.

Mr. Mason: We don't intend to alter that policy. We intend to furnish Mr. Strouss with everything we can.

The Court: Then the Court will defer its ruling striking those exhibits I have mentioned on your avowal that you intend to produce the original books and records.

Mr. Mason: As to Exhibits 3 and 7, you will make no ruling at all?

[fol. 1092] The Court: No, and the other matter we can take up at the noon recess. I thought before we adjourned today we should have an understanding as to the Christmas and New Year recess, about how long that will be so we can govern ourselves accordingly.

Mr. Booth: We will be glad to have that, your Honor.

(Thereupon, at twelve o'clock noon, December 6, the court recessed until two o'clock, P. M. this day.)

[fol. 1093] December 6, 1940; 2:00 P. M.

All parties being represented as heretofore noted, proceedings were resumed as follows:

Mr. Booth: I meant to ask Mr. Strouss, I understood from you, you have no questions of Mr. Gallin?

Mr. Strouss: No, I have no questions.

The Court: Then may that witness be excused permanently with his records?

Mr. Strouss: Yes, he may be excused.

The Court: Mr. Callin, you may be excused permanently.

F. W. GREEN was recalled to the stand and testified further as follows:

Cross-examination (Continued).

By Mr. Strouss:

Q. Colonel Green, I asked you to check your train sheets concerning the movement of two trains. You did that?

A. I did.

Q. It is a fact that the train sheets show that Train No. 15 on April 13th parted at Otwell, is that the station?

A. Yes, mile post 131, which is approximately Otwell.

[fol. 1094] Q. That train had 83 cars?

A. Yes, sir.

Q. It again parted at Hunter with the same consist?

A. Yes.

Q. And on the 16th of April, Train No. 19 broke in two at milepost 171 with a consist of 87 cars?

A. That is true, that is what the train sheets show.

Mr. Strouss: That is all.

Re-direct examination.

By Mr. Mason:

Q. Does the train sheet, Colonel, show whether the break in two's were caused by the breaking of knuckles or slip-bys of the couplers?

A. I have searched diligently as to these two trains mentioned and I fail to find any explanation of the cause of it, so I wired the Division at 10:40 this morning and I am expecting a telegram momentarily explaining the cause of the break.

Mr. Mason: Will it be satisfactory to you, Mr. Strouss, if we recall the Colonel and have him give that information if it becomes available?

Mr. Strouss: Yes. Colonel Green had told me that he had [fol. 1095] telegraphed.

The Court: With the exception of this telegram, the witness may be excused with his records.

W. R. TRIEM was recalled to the stand and testified further as follows:

Direct examination (Continued).

By Mr. Mason:

Q. Mr. Triem, I think that just before the noon recess I had asked you as to your familiarity with the rolling equipment of the Pennsylvania acquired by you in the course of your several positions on the divisions and in the general headquarters. Now, will you look at Defendant's Exhibit No. 2 relating to the construction of freight box cars of the Southern Pacific Co., and will you say whether from your knowledge of the Pennsylvania car equipment, the development of your equipment is along the same general lines as indicated by that exhibit?

A. Yes, I have examined this exhibit, and from knowledge and experience I saw at once that the development of the Southern Pacific in connection with its box cars was along the same lines as had occurred on the Pennsylvania Railroad.

[fol. 1096] Q. What is the standard of construction of the latest type of box cars of the Pennsylvania?

A. The latest type car is an all-steel car.

Q. Do you have any cars of the steel sides and ends with steel underframes in service?

A. Steel sides and ends?

Q. I mean steel superstructure, steel frames.

A. Yes, we do, we have quite a number.

Q. Do you have any cars that do not have either solid steel or steel underframe construction in revenue service?

A. No, we do not. Every car that we now own in any service in the Pennsylvania Railroad is a steel underframe or all-steel car.

Q. Do you operate refrigerator cars?

A. Oh, yes.

Q. Does that include the Pacific Fruit Express Company cars?

A. Yes, it does, in considerable numbers.

Q. Are you familiar with those cars?

A. Yes.

Q. You operate other refrigerator cars similar in type to D. F. E. cars, do you?

A. Oh, yes.

Q. Will you look at the passenger car exhibit, No. 4, and will you state whether from your observation and knowledge [fol. 1097] of the Pennsylvania passenger equipment the developments of that type of equipment has been along lines similar to those shown on Exhibit No. 4?

A. Yes, I looked at this exhibit, and with the exception that the Pennsylvania Railroad does not have any articulated equipment, the development of the Southern Pacific has been parallel with the development on the Pennsylvania Railroad.

Q. Do you operate any passenger-carrying cars on the Pennsylvania which are not of steel construction?

A. No, we do not.

Q. You operate Pullman cars in considerable numbers in your passenger service?

A. Yes, standard Pullman cars furnished by the Pullman Company.

Q. Are they of older types or the latest types available?

A. They are, of course, of all types depending upon the class of service.

Q. Will you look at the locomotive exhibit, Nos. 5 and 6, referring especially to the freight locomotive exhibit, do you have locomotives in service on the Pennsylvania corresponding with those shown on the exhibit of similar tractive effort [fol. 1098] and capacity?

A. Yes, we have locomotives of similar types. We don't have certain types that are in use on the Southern Pacific, but we have locomotives of as great or greater tractive effort.

Q. Do you have anything on your line similar to the Consolidation?

A. Yes, we have a Consolidation type. It, however, has a little greater tractive effort than the one shown here.

Q. Do you use the Mikado type?

A. Yes, we use the Mikado type to a considerable extent.

Q. Larger or smaller than the one shown?

A. We have two types; they are both a little bit larger.

Q. Do you use the 2-10-2 type locomotives?

A. Yes, we use the 2-10-2 of the larger type; in other words, the tractive effort of our 2-10-2's runs about eighty to eighty-five thousand pounds.

Q. Do you have a locomotive with a wheel arrangement similar to but slightly different than the 2-10-2 in regular service?

A. Yes, the Decapod or 2-10-0.

Q. What is the tractive effort of those locomotives?

[fol. 1099] A. The tractive effort of those locomotives is 90,000 pounds.

Q. Do you use a Mountain type locomotive in freight service?

A. Yes, to a considerable extent.

Q. The 4-8-2?

A. Yes.

Q. What is the tractive effort of the Pennsylvania Mountain type locomotive?

A. 64,000 pounds.

Q. Do you use other larger locomotives with various wheel arrangements like these Articulated Consolidations?

A. No, we don't, we don't have any except one particular engine that is used in hump service at Columbus, Ohio.

Q. How about your passenger power, what is the development there?

A. The development of passenger power on our line has been similar to the Southern Pacific. We have the Pacific type and the Mountain type.

Q. Are your Pacific type locomotives larger or smaller than the large Pacific type shown on Defendant's Exhibit 6? [fol. 1100] A. They are larger.

Q. Greater tractive effort?

A. Greater tractive effort.

Q. Greater fuel and tank capacity?

A. Greater fuel and tank capacity.

Q. And the Mountain type locomotives, likewise?

A. And the Mountain type the same way.

Q. Do you have a passenger locomotive with the 4-6-6-4 arrangement?

A. Well, that is the so-called New York World's Fair engine that was on exhibition down at the World's Fair, and it is expected to be put in service on the western part of the railroad this winter.

Q. That is a new acquisition?

A. That is a new acquisition, yes.

Q. How many of those have you?

A. We just have one.

Mr. Mason: May we withdraw Mr. Triem for a moment and return Mr. Randall to the stand?

The Court: Yes.

[fol. 1101] R. C. RANDALL resumed the witness stand for further examination as follows:

Cross examination:

By Mr. Strouss:

Q. I want to know what the consist of the Atlantic Express is, the passenger train shown as running from Chicago to Jersey City.

Mr. Mason: That is Exhibit 82.

A. Three Jersey City to Chicago Express cars. One Jersey City to Binghamton, New York. One express Jersey City to Lima, Ohio; one Jersey City to Chicago working car; one mail storage Jersey City to Chicago; one RPO car, one express Jersey City to St. Louis via the Wabash at Huntington; one express from Jersey City for Dallas via Chicago; one A C coach, one A C sleeper, one A A diner, that is the regular train. Those storage and sealed express cars are augmented and entirely dependent on the amount of traffic.

Mr. Mason: That is the westbound No. 7.

A. Westbound No. 7.

Mr. Strouss: I asked about the eastbound and you give me the westbound. That was the Pacific that you gave me.

A. Yes, that is right. The train you asked about is [fol. 1102] Train No. 8 from Chicago to Jersey City has one express car sealed from Chicago to Jersey City; one working express car from Chicago to Jersey City; one air conditioned coach from Chicago to Jersey; one air conditioned lounge diner from Marion to Jersey City; one air condition 10-2-1 Pullman sleeper from Chicago to Hornell, and then east of Hornell Train No. 8 is also a milk train.

It picks up milk, and the difference between this regular consist of the train and what may be found on it on any individual day is the amount of milk it picks up at Elmira and Susquehanna, and that train oftentimes goes into Jersey City with as high as 40 cars.

Q. This type of consist, the milk and that type —

A. (Interrupting:) Part of that milk is handled on the head end and part of it is handled on the rear end behind the passenger-carrying equipment.

Q. But your consist, so far as passenger train coaches are concerned —

A. Is as I gave it to you. That is the standard consist augmented by whatever milk may be available.

Q. Exhibit 81, typical examples of freight trains handled, I wasn't sure, did you say that included only through trains?

A. Yes, in that sense, through trains that start at the [fol 1103] terminal at one end of the operating division and continue through to the other end of that operating division.

Q. You didn't mean a through train in the sense of a train from New York to Chicago?

A. Not necessarily; as depicted on this exhibit, it is from Division point to Division point.

Q. The locals, as you would use it here, would mean the trains that were doing way-freight work?

A. And operate to some intermediate points on the division, turn-around service. There are none of those kind of trains included in this exhibit.

Q. They would be usually quite short trains?

A. Yes.

Mr. Strauss: That is all the questions I have. I will not have any more questions of Mr. Randall.

Redirect examination.

By Mr. Mason:

Q. This Exhibit 81 includes trains which, though operating from one subdivision terminal to the next, may have [fol 1104] performed local work at intermediate points?

A. They may have set off or picked up intermediate between the two points the initial points and the terminus point on the division.

Q. So long as they made the run from one to the other, they are shown here?

A. And the maximum cars shown in this exhibit are the maximum cars in those trains at any one particular time enroute.

Mr. Mason: That is all.

The Court: If there are no further questions and no objection, this witness may be excused with his records.

(Witness excused.)

W. R. TREEM was recalled for further direct examination as follows:

Direct examination.

By Mr. Mason:

Q. You heard mention made of schedules for the movement of freight between the eastern seaboard and western points. Does Pennsylvania participate in any such schedule?

A. Yes, the Pennsylvania participates in the schedules between the west and the east by means of service advertised from Chicago and St. Louis and from Indianapolis and other junction points in the west.

Q. You also maintain your own schedules for the handling of traffic which you originate and deliver to destination or to connecting lines?

A. Yes, we do.

Q. Do you advertise those?

A. Yes.

Q. What is your schedule for the handling of perishables received at the junction at or near Chicago and moving to eastern termini?

A. We have three schedules out of Chicago, at three A. M., 8 A. M., and 2 P. M., and they run from 39 to 48 hours. One of them is 48, the other is 39, and the other is 43 hours and 45 minutes from Chicago to Jersey City, which is on the west bank of the Hudson River.

Q. That is for New York delivery?

A. For New York delivery, yes.

Q. Do you make corresponding time to Philadelphia?

A. We make corresponding time to Philadelphia and make corresponding time to Baltimore and Washington, and we make the advertised connections with the D and H at Wilkes-Barre, and with the New York, New Haven and [fol. 1106] Hartford at Greenville across the bay from Bay Ridge when New Haven traffic is interchanged. All of these schedules are on a comparable basis with the other eastern lines and fit into the coordinated arranged service train schedules that are advertised for the handling of traffic from the west to the east, and from the east to the west.

Q. Do you have similar times westward from the principal points of origin on the eastern seaboard?

A. Yes, we have; for instance, from New York two trains to the west, to St. Louis and two trains to Chicago, and an overnight train to Pittsburgh, from New York and Philadelphia, which connects with other trains at Pittsburgh and provides a delivery of the L. C. L. freight throughout Ohio, and the eastern part of the state of Indiana.

Q. Do you connect with the Chicago and Northwestern either directly or through a belt line at Chicago?

A. Oh, yes.

Q. And with the St. Louis Southwestern and the Missouri Pacific?

A. At St. Louis.

Q. East St. Louis?

A. East St. Louis, yes, sir.

Q. Do you maintain similar eastward schedules for the delivery of perishables and other freight from the west [fol. 1107] moving to Pittsburgh?

A. Yes, on a comparable basis performed with the over-all service to the seaboard.

Q. What is the percentage of performance on these schedules, according to your past experience?

A. From my observation in the past six months, I would say that it is a rare occasion upon which perishable freight is not delivered at the various produce terminals in time for the market. Extraordinary efforts are made, if something occurs due to storm or accidents, to get that freight delivered on time. So far as the general performance is concerned of the trains themselves, I am not in a position to say what the exact percentage is, but I would say it is 95 to 97 per cent on-time performance.

Q. Can you state, generally, the nature of the territory served by the Pennsylvania? Is it predominantly agricultural or mining or industrial?

A. Of course, on the basis of the volume of traffic handled in tonnage, bituminous and anthracite coal is the principal commodity. However, when you consider the territory served extending along the eastern seaboard, and across the state of Pennsylvania and Ohio, Indiana and [fol. 1108] Michigan, it would have to be considered as predominantly serving a manufacturing territory so far as originating traffic is concerned.

Q. I take it, the agricultural side of your business as a carrier is more as a connecting carrier than as an originating carrier?

A. More as a connecting carrier than an originating carrier, except for portions of Indiana and Ohio and Northern New York, where a considerable amount of both grain and farm products, apples and grapes and fruits are collected at different seasons of the year.

Q. Do you know, and if so will you state, whether the Pennsylvania participates in the handling of freight originating on the Southern Pacific lines in California and Arizona?

A. Yes, I know that the Pennsylvania does handle traffic originating on the Southern Pacific.

Q. Does the Pennsylvania originate or as intermediate carrier handle any traffic destined to points reached on or via the Southern Pacific in California and Arizona?

A. Yes, our westbound connections by westbound service that I mentioned a moment ago, is coordinated with the westbound service of the Western Lines and the Southern Pacific.

[fol. 1109] Q. Does that include, for example, the service coordinated with the service of the Cotton Belt to St. Louis and thence by Southern Pacific lines to the west coast?

A. That is correct.

Q. Or equally in connection with the Chicago and Northwestern, Union Pacific, Southern Pacific route through Omaha and Ogden?

A. And other lines to Chicago, yes.

Q. You were present when Mr. Randall testified respecting the passing reports which the Erie undertakes to furnish to receivers and shippers?

A. Yes, I was.

Q. Does the Pennsylvania provide any similar service of information to shippers or receivers of perishables moving via its lines?

A. From what he described, I would say that our service along those lines is very similar. We maintain what is called a telegraphic passing report of perishables at all of our principal yards, and the numbers of the cars, the contents, the name of the shipper, and the name of the consignee, and the train in which it is moving is handled by teletype through the office of the superintendent of freight transportation in charge of that particular area. A copy is [fol. 1110] forwarded at the same time to the destination agent, and the destination superintendent of freight transportation, so that the consignee is at all times fully conversant with the movement of his perishable, that is, the consignee's perishable.

Q. Is any report made to your traffic agent in the originating territory?

A. Oh, yes, we send passing reports by airmail from Chicago, Pittsburgh, Philadelphia, and New York, every day to the off-line agents to cover the traffic which originates in the territory served by them.

Q. We have so far spoken of your east and west schedule. Does the Pennsylvania handle any perishable traffic to Philadelphia and New York originating in producing areas in southeastern United States?

A. Yes, it handles a very large volume of perishable traffic moving from the southeast through Potomac yard which is just outside of Washington, the connection of the R. F. and P. which gathers up all the traffic from connecting lines in the south.

Q. Are those perishable products of the same general character as those produced in California and Arizona?

[fol. 1111] A. Yes, they are.

Q. And reaching the same market?

A. Reaching the same markets.

Q. Do they likewise move on schedule?

A. They likewise move on schedule.

Q. Do you handle the eastbound perishable which you receive at St. Louis or Chicago for New York and Philadelphia delivered in trains of more than seventy cars or less than seventy cars as a rule or a custom?

A. As a rule it will be that they run in trains of more than seventy cars on both the Northwest route from Chicago and the Southwest route out of St. Louis.

Q. What practice do you follow as to the number of cars in the trains carrying the perishable from the southeast received at Potomac yard?

A. We follow the same general practice that we follow in the west.

Q. Have you before you a statement in one sheet entitled "The Pennsylvania Railroad Typical Examples of Freight Trains Handled between Certain Terminals, July 10-19, inclusive, 1939?"

A. Yes, I have.

Mr. Mason: May we have the statement marked as Defendant's exhibit next in order?

[fol. 1112]. The Court: It may be marked.

The Clerk: Defendant's Exhibit No. 83 for identification.

Mr. Mason: Did you prepare Exhibit 83 for Identification?

A. I had this exhibit prepared under my direction.

Q. Did you supervise its preparation throughout?

A. I supervised its preparation throughout.

Q. From what sources was the exhibit prepared?

A. The information contained on this exhibit, with the exception of the ruling grade, was all obtained from wheel reports which are filed in the office of the superintendent of car service of the Pennsylvania Railroad Company, Philadelphia.

Q. Did you obtain the wheel reports for these particular districts and days, and have this study compiled from them?

A. I did.

Q. Does this showing include all of the trains operated between the points shown in the "From and To" columns on the days referred to?

A. This shows the movement of all through trains between the terminals shown. It does not include the local or way freight trains.

[fol. 1113] Q. By "way-freight" what do you mean, precisely?

A. I mean by that those trains which handle cars for delivery at intermediate points. Sometimes they handle

L. C. L. freight for delivery at local stations and also pick up freight at local stations.

[fol. 1114] Q. Are these trains generally trains then that move from terminal to terminal without substantial change of consist?

A. That is correct.

Q. Does this in all cases include main line trains or are there certain branch or auxiliary lines referred to here?

A. No, this exhibit was set out to show typical examples and on the Fort Wayne division between Chicago and Crestline, a branch operation to Logansport, and on the Panhandle division between Columbus and Pittsburgh, branch operations were shown, whereas on the middle division between Altoona and Harrisburg, only the main line operations were shown.

Q. Does this exhibit cover steam operated lines only?

A. This covers steam operated lines only.

Q. No electrified lines?

A. No electrified lines.

Q. From what source did you obtain the information as to ruling grade?

A. I obtained that information from the condensed profiles on file in the office of the chief engineer of the Pennsylvania Railroad.

Q. Are the conductors' wheel reports used in preparing [fol. 1115] this exhibit, and the condensed profiles, for the portions of the line referred to, in the courtroom?

A. Yes, sir, they are.

Q. Has the exhibit been compared and checked against the original sources?

A. It has. I participated in it sufficiently to insure that the check was being made accurately.

Q. Will you say whether or not the exhibit is a true and correct reflection of the information contained in the original sources?

A. It is to the best of my knowledge and belief.

Mr. Mason: Have you any questions, Mr. Strouss.

Mr. Strouss: No questions.

Mr. Mason: We offer the exhibit in evidence as No. 83.

Mr. Strouss: The same objection.

The Court: The objection is overruled. It may be admitted in evidence.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 83.")

Mr. Mason: Mr. Triem, did you select the period shown on the exhibit?

A. Yes, I did.

[fol. 1116] Q. For what reason?

A. The period was selected to provide typical examples of freight trains handled, and from my general knowledge of the operations on the system for 1939, I was assured that the month of July after the 4th of July holiday period represented the average typical normal operation on those three divisions.

Q. Have you shown, or are there shown, rather, on exhibit No. 66 the districts which are covered by exhibit No. 83?

A. Yes, they are shown in heavy black lines.

Q. Well, is this line from Chicago to Crestline and thence to Pittsburgh? Is that one of the principal main lines to Chicago?

A. That is the principal main line known as the "Fort Wayne" route between Chicago and the East.

Q. Is that line employed by you to any extent in the handling of this scheduled perishable traffic received at Chicago?

A. Yes, to a considerable extent.

Q. Is it also used for the movement of westbound scheduled freight?

A. It is.

Q. Now, what is this line from Pittsburgh via Columbus and Indianapolis to St. Louis?

[fol. 1117] A. That is the Panhandle route to the south, west to St. Louis.

Q. Is there any perishables handled over that line?

A. Yes, there is a large volume of perishables handled over that line.

Q. In scheduled trains?

A. In scheduled trains.

Q. What is the nature of the line between Altoona and Harrisburg?

A. Between Altoona and Harrisburg, that is the principal through east and west route of the Pennsylvania Railroad.

Q. Does that handle the traffic moving eastward over the other two lines and coming together at Pittsburgh?

A. That is right.

Q. What is the nature of the line from Circleville via Zanesville to a junction with the Columbus-Pittsburgh line?

A. That is a branch line extending down into the central portion of Ohio and is one of the lines I mentioned a moment ago as being concerned principally with agricultural products.

Q. What is the nature of the line from Mingo Junction to Benwood and back to the main line at Weirton, is that [fol. 1118] correct?

A. That is right. That diagram represents two separate branches, one on one side of the Ohio River and one on the other, with a bridge connecting the two of them at Benwood. Lying on both sides of the Ohio River between Weirton and Steubenville, Mingo Junction and Benwood are steel and manufacturing plants of various kinds and that is a typical example of an industrial branch line.

Q. What is this line leading from the main line down to Washington, Pennsylvania?

A. That is another one of the industrial branch lines, but it is also concerned with the movement of a considerable volume of coal.

Q. Did you make any summation of the amount of perishable traffic handled in the trains shown for the ten-day period, July 10 to 19, 1939, on exhibit 83?

A. Yes, in connection with the discussions that occurred here with respect to the movement of perishables it should be noted that these three examples, namely, the Fort Wayne division between Chicago and Crestline, the Panhandle division between Columbus and Pittsburgh, and the middle division between Altoona and Harrisburg, provide a good cross-section of the amount of traffic on the Pennsylvania [Vol. 1119] Railroad between the East and the West, and on line 5 of exhibit No. 83 it will be noted a movement from Chicago to Fort Wayne. My addition of the figures on that line indicate that there was moved from Chicago in this ten-day period a total of 611 cars of perishables. On the line "Columbus to Pitcairn," line 14, it will be noted that there was a total of 3,072 cars of perishables handled in this ten-day period. In other words, there was a total of 3,683 cars of perishables moving east on these two divisions during this ten-day period, which on the rate of

265 days a year would produce a total of approximately 134,000 cars of perishables. At the same time, to indicate how this traffic is gathered together and moved east over the railroad east of Pittsburgh, line 1 showing Altoona-Enola, shows that there was a total of 3,577 cars of perishables moved east from Altoona, or at the rate of approximately 130,000 cars per year.

Q. You refer to certain of these operations, particularly those in lines 23 and below in the exhibit as being branch line operations, and I notice that comparatively few of the trains in such operations exceeded 40 cars in length. Will you say whether or not these branch line operations [fol. 1120] are typical of branch line operations on the Pennsylvania generally?

A. They are typical in this respect, that where the volume of traffic is not great, and only daily, or semi-weekly service is performed, it is likely that trains on the average branch will have about this general size and make-up. However, there are a number of branches, particularly in the coal territory, where the lengths of trains are much greater than this.

Q. What considerations then govern the length of trains to be operated over the main or branch line service on the Pennsylvania?

A. The consideration of economy and efficiency of operation is the basis upon which our trains are operated, and the power furnished is to the limit of the distribution which the superintendent of freight transportation is required to make, is distributed to fit as long trains as the volume of traffic will warrant.

Q. Does the volume of the traffic offered have anything to do with the length of the trains to be operated?

A. It has almost everything to do with it. If you have sufficient volume of traffic to one destination, a long train [fol. 1121] will be operated. If there is not sufficient volume of traffic to one destination, then it is necessary to run smaller trains.

Q. As between the policy of holding cars at terminals in order to build up long trains, and moving cars in order to maintain schedules regardless of the amount of traffic offered, which course do you adopt?

A. It is quite essential that the Pennsylvania follow the practice of so arranging the movement of its traffic that it meets with the advertised schedule, and where insufficient

volume of traffic is available at the initial terminal to make up a reasonable sized train, it is necessary to run what we would consider an unreasonably small train.

The Court: We will take a brief recess at this time.

(Thereupon a short recess was taken, after which the witness was recalled to the stand and proceedings were resumed as follows:)

The Court: You may proceed.

Mr. Mason: Mr. Triem, I call your attention to a statement bearing the title "Pennsylvania Railroad Company, [fol. 1122] Maximum Number of Cars Handled in Various Main Line Passenger Trains, July 10th to 19th, Inclusive, 1939," consisting of two sheets. Have you that statement before you?

A. Yes, I have a copy of that statement before me.

Mr. Mason: May we have that marked defendant's exhibit No. 84 for identification.

The Clerk: Defendant's exhibit No. 84 for identification.

Mr. Mason: Did you prepare exhibit No. 84 for identification?

A. I had this statement prepared under my direction.

Q. From what sources was it prepared?

A. The information was taken from the wheel reports on file in the office of the superintendent of car service of the Pennsylvania Railroad at Philadelphia.

Q. Who selected the period covered by the exhibit?

A. I selected the period myself, and primarily to make it conform with the period used for the freight exhibit, feeling that the period was typical or would represent typical passenger movement for the year 1939.

Q. Were there any circumstances present during the [fol. 1123] ten-day period referred to which would either augment the normal passenger movement or cause it to be less than normal?

A. I didn't think so. I felt it was about normal for the period, neither as great as some periods of the year nor as small as some periods of the year.

Q. Does this exhibit cover all your main-line passenger trains in the districts referred to?

A. It does.

Q. Does this include lines other than those which are outlined in heavy black on exhibit No. 66?

A. Yes, it does.

Q. Has the exhibit been checked against the original sources?

A. It has.

Q. Will you say whether or not it is true and correct?

A. It is correct to the best of my knowledge and belief.

Q. Now, have you the wheel reports covering this exhibit and exhibit No. 83 as well available in the courtroom?

A. Yes, I have.

Q. And the profiles showing the ruling grades that were referred to in No. 83?

[fol. 1124] A. Yes, sir.

Q. And they are available for use of opposing counsel?

A. They are.

Mr. Mason: We offer exhibit No. 84 for identification, and at the same time tender the wheel reports and the profiles. I make the offer at this time, but defer to Mr. Strouss for any questions that he may have.

Mr. Strouss: I have no questions. The same objection.

The Court: Objection is overruled. It may be admitted in evidence.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 84.")

Mr. Strouss: I have one question.

Q. Were these all straight passenger trains, or are there some that carry express?

A. They carry express and mail and passengers.

Q. This Federal Express, is that predominately passenger or express?

A. I think that is predominately passenger.

Q. What about your through trains, the New York-Washington Express?

A. I would have to look on my wheel reports, Mr. Strouss, to determine exactly what those are, but the wheel reports [fol. 1125] show exactly what the consists of those trains are.

The Court: If it is convenient, may the court see one of those wheel reports, just as a matter of becoming familiar with what the report consists of.

Mr. Mason: You have handed me, Mr. Triem, copy of your form CT-1023, which is a passenger conductor's car report of through trains. This is a passenger wheel report.

A. That is known as a wheel report for passenger trains.

Q. You have also handed me copy of your form CT-1034 and CT-1034A. Are both of these forms used for wheel reports for freight trains?

A. Two of them together constitute the report which the conductor makes to the superintendent of car service. The small sheet is removed by the superintendent of car service and is cut into pieces, each piece having a hole in it at the left-hand side and distributed to clerks who are in charge of different railroad cars, and these pieces are slipped over spindles, and at the end of the month constitute the record for the Illinois Central, for instance; the New York Central, or whatever line is represented on the number, and is [fol. 1126] just a method of accounting for the cars. The underlying sheet, the large sheet, is a carbon so far as the left-hand half of the sheet is concerned, and the righthand side is an original in pencil for use of the superintendent of car service in his records.

Mr. Mason: May the record show that the blanks supplied to the court have also been supplied to opposing counsel for their examination.

Q. I am referring to exhibit No. 84, Mr. Triem, again. The trains shown on the first sheet operated over what route and between what points?

A. Train 101 is a train which operated between New York and Washington over the New York-Washington route along the eastern seaboard.

Q. That is the direct line through Philadelphia, Wilmington, Baltimore to Washington, is it?

A. Yes, sir.

Q. Is the same true of each of the other trains on the first sheets insofar as they operated over the Pennsylvania?

A. That is correct. All these are of the same character under the general heading "New York-Washington route."

Q. Refer to the first block on the second sheet. Over what route did those trains operate?

[fol. 1127] A. Those trains operated over the New York division to North Philadelphia and thence over the passenger line of the Philadelphia division and the middle division and Pittsburgh division to Pittsburgh.

Q. Operating via North Philadelphia, Harrisburg, Altoona to Pittsburgh?

A. That is correct.

Q. The trains in the second block marked "New York-Chicago route"?

A. Those trains operated over the same route that we just described and continued west over the Fort Wayne line via Crestline and Fort Wayne into Chicago, and in the reverse direction eastward.

Q. Now, in the third block, over what route did they operate?

A. The third block under the heading "New York-St. Louis route" operated over the same route as the trains between New York and Pittsburgh, and thence over the southwest Panhandle route from Pittsburgh through Columbus and Indianapolis to St. Louis.

Q. Does the exhibit show the maximum number of cars handled in each train referred to at any time between the points shown?

A. Yes, it shows the maximum number of cars that were [fol. 1128] in the train at any one time in its movement between the terminals as shown.

Mr. Mason:

Q. These trains, Mr. Triem, between New York and Washington do they set out cars enroute generally?

A. Very infrequently, once in a while a car may be added or taken out at Philadelphia.

Q. What about those trains on the New York-Pittsburgh, do they set out any cars between New York and Pittsburgh or add any between Pittsburgh and New York?

A. There may be occasions when cars will be added or taken off at Harrisburg and less frequently at Altoona.

Q. What about the trains between New York and Chicago, do they set out enroute to any extent?

A. To no great extent.

Q. As to the New York-St. Louis, do you have intermediate sleepers set out or picked up at Columbus or Indianapolis?

A. There are some cases in which cars are set off and picked up at Pittsburgh, Columbus and Indianapolis.

Q. Which of these runs on Exhibit 84 include crossing the Alleghany Mountains that you have previously described?

A. All of the trains moving on the Pittsburgh-New York route, New York-Chicago route and the New York-St. Louis [fol. 1130] route.

Q. That would be all the trains in both directions on the second sheet?

A. That is right.

Q. You spoke in your earlier testimony of some factors which determine the number of cars in freight trains. I will ask you whether these factors produce trains of different lengths on different divisions or on different days on the same division?

A. The conditions vary to such an extent that the lengths of trains vary as between trains of the same symbol, as between trains of different symbols on the same division and as between trains on different divisions.

Q. Have you any rule on the Pennsylvania as to the number of cars to be put in a freight train?

A. No, we do not.

Q. Do you know in your experience on the Pennsylvania of any such rule having been in effect?

A. Not to my knowledge, no.

Q. When you were Superintendent of freight transportation at Pittsburgh, was there any practice or custom as to the maximum length of a train over the mountain district Harrisburg and Pittsburgh?

[fol. 1131] A. Yes, it was very infrequent that a train of more than 125 cars was moved between Altoona and Pittsburgh in either direction. One reason for that, the principal reason was that you couldn't handle any more than that number of cars with the power available over the steep grade eastward, and it was inadvisable to handle excessively long empty trains because of the capacity of the sidings and yards and facilities generally to accommodate them. There was no reason for doing it because you had more engines than you needed for your westbound movements.

Q. Do you have an un-balance of car-miles?

A. Generally the movement was a little bit greater westbound, but not very much.

Mr. Mason: I think that is all. Thank you, Mr. Triem. Do you wish to defer cross examination?

Mr. Strauss: Yes, but I want one or two questions about these wheel reports.

Cross-examination.

By Mr. Strouss:

Q. Mr. Triem, the wheel report has application only to the particular train to which it applies, isn't that true?

A. That is true, except that I want to clear it up a little [fol. 1132] bit. We talk about a train rather loosely as being one thing one time and again we talk about it being something else another time. A train in this report here and as we have discussed it up to this time is a unit running between two terminals under the jurisdiction of one crew. A train has a symbol, as a symbol train may be any number of trains which operate from Chicago to New York. It will be the same train, but it will be manned by different crews and therefore it becomes a series of trains, if I make myself clear.

Q. You mean the first 78 and the second 78 and so forth?

A. Not exactly. I mean by that the "CMB" will start out of Chicago and that is one train service that day, but so far as the car record is concerned, there will be a CMB on the Fort Wayne Division, one on the Eastern Division, one on the Pittsburgh Division, a series of them. Now to answer your question, one wheel report will be made for this train from Chicago to Crestline.

Q. That is one division?

A. That is one division. One wheel report will be made for that train from Crestline to Altoona, that is, two divisions [fol. 1133]: one report will be made from Altoona to Enola as a third division.

Q. But that wheel report will not give any information as to any other trains on that division?

A. It will not, it only applies to that particular train.

The Court: And does account for all the cars in that train?

A. It accounts, your honor, for all the cars which that train has touched during its trip, whether it picks them up or sets them off or moves them.

Mr. Strouss:

Q. To know whether there was one or a dozen trains operating on that division during that particular day or period, that information could not be gotten from one wheel report?

A. No, it would have to be taken from the collection of all the wheel reports for all the trains operated on that day to construct the operation for that division.

Q. But that information is given on the train sheet itself, that will show all trains operated on a particular division during that day?

The Court: When you say the train sheet, you refer to this sheet here shown as exhibit No. 14?

[fol. 1134] Mr. Strauss: That is a train sheet on the New York Central, I believe it was, yes, that is what I am talking about.

A. Not wishing to be technical, the answer to your answer is that it requires the use of one or more train sheets covering the route of the train over a division to determine the total number of trains that may have operated on a division on a given day.

Q. That is because of sub-divisions on the division?

A. Yes.

Q. There would be a train sheet for each sub-division that the train passed through?

A. That is illustrated by the fact that on this panhandle division route I am talking about, there are three different train sheets would have to be consulted to get the whole movements of those through-trains on the Panhandle Division.

Q. But that does give a record of every train that was operated over the division?

A. Yes, sir.

Q. And that is the only record that you have and that is all thrown in together, isn't it?

A. I believe that is true, I don't know of any other record that I can think of right now.

[fol. 1135] Q. You don't have the train sheets here?

A. No, I do not.

Mr. Booth: We don't undertake by this exhibit to show all the trains that operated between these points on a certain day. The exhibit is headed, "Typical Example of Freight Trains Handled between certain terminals."

The Court: That is true, but counsel is interrogating to determine the modus operandi.

Mr. Booth: I thought he was laying the foundation to try to stake out the exhibit.

The Court: Well, maybe you are right.

Mr. Booth: This exhibit is exactly what it is headed.

Mr. Strouss: That is what I am trying to find out.

The Court: Any further examination of this witness?

Mr. Strouss: Not at this time.

The Court: You are reserving your rights to cross examine him?

Mr. Strouss: Yes, sir.

The Court: It seems to the court if it is possible and in order not to discomode the witnesses who have been examined on direct, rather than hold them over until Tuesday, [fol. 1136] we should excuse them if possible.

Mr. Strouss: I believe Mr. Triem and Mr. Kraemer are the only two witnesses that I haven't cleared the decks on.

The Court: That will just leave Mr. Kraemer and Mr. Triem?

Mr. Strouss: Answering Mr. Booth's question I don't want to be misunderstood or interpreted as meaning that I don't want those train sheets. I do want them and ask for them if they can be produced.

Mr. Booth: We feel under the underlying document rule we are not compelled to produce train sheets when we don't produce an exhibit that does not depend on the train sheets. The train sheets can be used to determine all the trains that run out of the division but insofar as typical examples are concerned, we have produced the underlying record, the record made by the conductor.

The Court: I don't think there is anything before the court to pass on. Go ahead.

[fol. 1137] RUSSELL J. HAMMOND was called as a witness on behalf of the defendant, and being first duly sworn testified as follows:

Direct examination.

By Mr. Mason:

Q. Will you please state your name and residence?

A. Russell J. Hammond, Boston, Massachusetts.

Q. Will you state your position with the Boston and Maine Railroad?

A. I am assistant to the operating vice-president and general manager.

Q. You have been in the service of the Boston and Maine for some time?

A. Since August 1, 1912.

Q. Did you have prior railroad experience?

A. From 1903—starting back in 1900, summers, while I was in high school, I was in the engineering department of private engineers on interurban electric railroad construction. In 1903, I was in the New Haven Engineering Department on electrification; in 1906 I was with the Milwaukee on location on the west coast; in 1907 I returned during the panic of that time to Boston, and was in the employ of the New Haven for about six months, and returned to a contractor I had been previously working for, [fol. 1138] and worked for that contractor till 1912.

Q. What have been your positions with the Boston & Maine since 1912?

A. I started in 1912 as a draftsman, was in the engineering, in various positions, assistant engineer, office engineer and designing engineer, up until February 26, 1926. During Federal control, in addition to being in the engineering department, I also acted as assistant to the Federal manager on such special assignments as he cared to give me. On February 25, 1926, I was appointed assistant to the vice-president and general manager, and on January 1, 1927, I was appointed assistant to the president and after his death, on January 1, 1930, I reverted back to my position as assistant to the vice-president and general manager.

Q. What is the nature of your duties as assistant to the vice-president and general manager?

A. The vice-president and general manager of the Boston and Maine has jurisdiction over the operating, transportation, mechanical and police departments. I am his assistant, with jurisdiction in all those departments.

Q. Does that include the jurisdiction over the maintenance [fol. 1139] of way and engineering department?

A. No, the maintenance of way department on our road comes under the chief engineer.

Q. Does your jurisdiction extend to the motive power and rolling equipment?

A. As assistant to the vice-president, yes, sir.

Q. Have you before you a map, outline map, of one sheet, bearing the title "Boston and Maine Railroad Company?"

A. Yes, sir.

Mr. Mason: May we have the sheet marked as Defendant's exhibit next in order?

The Court: It may be marked.

The Clerk: Defendant's Exhibit No. 85 for Identification.

Mr. Mason: Is this map a reasonably accurate outline of the lines of the Boston and Maine Railroad Company?

A. Yes, sir.

Q. Showing the states in which you operate?

A. Yes, sir.

Q. And some of the principal terminals and junctions on the line?

A. Yes, sir.

Mr. Mason: We offer the statement in evidence as No. [fol. 1140] 85.

Mr. Strouss: Same objection.

The Court: Objection overruled, it may be admitted.

(The document referred to was received in evidence, and marked "Defendant's Exhibit No. 85.")

Mr. Mason: What is the approximate mileage of the Boston and Maine?

A. To be exact, it is 1916 miles.

Q. That includes the main and branch?

A. That is miles of road.

Q. Are you familiar with the statistics and records of the Boston and Maine?

A. Yes, sir.

Q. Did you have anything to do with their preparation, or the supervision of their preparation?

A. Well, our department furnishes a great many details that make up those statistics. When it comes to the analysis of the statistics, I spent a great deal of time on them and am very familiar with them.

Q. Are you familiar with the annual report rendered by your company to the Interstate Commerce Commission?

A. Yes, sir.

[fol. 1141] Q. Have you before you the statement in one sheet, bearing the title, "Boston and Maine Railroad Freight Operating and Freight Transportation Expenses Related to Traffic, Years 1922 to 1939, Inclusive?"

A. Yes, sir.

Mr. Mason: May we have this statement marked No. 86 for identification?

The Court: It may be marked.

The Clerk: Defendant's Exhibit No. 86 for identification.

Mr. Mason: Did you prepare Exhibit No. 86 for Identification?

A. It was prepared under my supervision.

Q. The source is what?

A. Annual report to the Interstate Commerce Commission.

Q. Did your company render annual reports for the Boston and Maine apart from any other railroad for each of the years 1922 to 1939?

A. Yes, sir.

Q. Have you those annual reports present with you in Tucson?

A. Yes, sir.

Q. Are they in the court room?

A. Yes, sir.

[fol. 1142] Q. Referring to Exhibit No. 86, does that reproduce the original figures shown in the appropriate places in the annual report in columns B, C, and D, for the several years?

A. Yes, sir.

Q. I take it that the matters shown in columns E and F, and as well as in the three blocks at the foot of the exhibit, are computations from the other figures on the face of the exhibit?

A. Yes, sir.

Q. Has the exhibit been checked?

A. Yes, sir.

Q. Will you state whether or not it is a true and correct reproduction as to the matters reproduced, and a true and correct computation as to the other matters?

A. It is.

Mr. Mason: Have you any questions, Mr. Strouss?

Mr. Strouss: Not unless I can ask those general questions, and then be through with this.

Mr. Mason: Perhaps you would rather have the exhibits offered and received.

Mr. Strouss: Yes.

Mr. Mason: I offer the exhibit in evidence as Defendant's Exhibit No. 86.

The Court: I understand that the records which support [fol. 1143] this exhibit are here in the courtroom?

A. Yes, sir.

Mr. Strouss: The same objection.

The Court: Objection overruled. It may be admitted.

(The document referred to was received in evidence and marked, "Defendant's Exhibit No. 86.")

Mr. Mason: Have you some questions now, Mr. Strouss? I will be glad to defer further examination.

Mr. Strouss:

Q. The amounts shown in Column C, that is the total of Items 201 to 462 of the Annual Report?

A. That is correct, with the credit for Investment Account which follows 462.

Q. The amounts shown in Column D is the total of Items 371 to 420 of the Annual Report?

A. That is correct.

Mr. Strouss: That is all.

Mr. Mason: Mr. Hammond, have you a statement in one sheet bearing the title, "Boston and Maine Freight Service Operating Averages, Calendar Years 1922, 1924, 1926, 1928, 1930, 1932, 1934, 1936, 1938, and 1939?"

A. Yes, sir.

Q. Was this exhibit prepared by you or under your direction?

A. It was prepared under my direction.

Q. From the annual reports as shown in the source footnotes at the foot of the exhibit, together with the forms OS-A and OS-E?

A. Yes, sir, as shown by Item marked "Sourcee."

Q. All of these are reports filed by your company with the Interstate Commerce Commission?

A. Yes, sir.

Q. Have you the counterparts of the retained copies of those reports available with you here?

A. Yes, sir.

Q. Certain of these items are by computations from the others, isn't that correct?

A. Yes, sir.

Q. All as shown by the various references at the foot of the exhibit?

A. Yes, sir.

Q. These computations shown in Column M, "percent in increase," or in some cases decrease, did you check or make those computations?

A. They were made and checked under my supervision.

Q. Is the exhibit otherwise a correct reproduction of the original material or a correct computation of the material [fol. 1145] from the material thus taken?

A. Yes, sir.

Q. Will you say whether or not it is true and correct to the best of your knowledge and belief?

A. It is.

Mr. Mason: Have you any questions on this exhibit?

Mr. Strouss: No.

Mr. Mason: We offer the exhibit as No. 87.

Mr. Strouss: The same objection.

The Court: Objection overruled. It may be admitted.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 87.")

Mr. Mason: It was understood, of course, that the annual report and the forms OS-A and OS-B, concerning which the witness has testified as the source of the material, are tendered for the use of opposing counsel.

Q. Mr. Hammond, will you refer to Exhibit No. 86, please? It appears from Exhibit 86 that the volume of Revenue Ton Miles handled by the Boston and Maine in 1922 was two billion, six hundred and ninety million in round figures, and in 1939, two billion, two hundred and forty-eight million, in round figures?

[fol. 1146] A. Yes, sir.

Q. Can you compute quickly the amount of the percentage of decline in revenue ton miles between those two years?

A. About 16.4 per cent.

Q. I call your attention to the figure of Freight Operating Expenses for the year 1922, that is approximately \$40,750,000, is that correct?

A. Yes, sir.

Q. And for 1939 a corresponding figure is \$20,479,000?

A. Yes, sir.

Q. Is that approximately 50 per cent reduction in freight operating expenses?

A. Approximately fifty per cent reduction in expenses, yes.

Q. Correspondingly, is there a 50 per cent reduction in freight transportation expenses, Column D, between 1922 and 1939?

A. Yes, sir.

Q. Is it correct from this exhibit that you have handled in 1939, traffic sixteen per cent less expressed in revenue ton miles than in 1922 with approximately half the freight operating expense and approximately half the freight transportation expense?

A. Yes, sir.

Q. Can you find any explanation of your ability to reduce expenses so greatly out of proportion to the reduction in volume of traffic on Exhibit No. 87?

A. In 1922 we owned 25 2-10-2 locomotives. Their operation—I am talking from my memory now—was confined to the lines west of East Deerfield, which is shown on Exhibit 85, while we used consolidation type engines everywhere else on the railroad. In 1925 the bridges were strengthened between Ayer and Boston, which allowed us to extend the runs of those big engines through to Boston. You will find the first jump is in that period—when I say, "Jump" an increase in our gross ton miles per freight train-hours, which is the efficiency measuring stick.

Q. Such increase in gross ton-miles per freight train-hours shown on Exhibit 87?

A. Shown on Exhibit 87. In 1928 we bought 25 Berkshire type locomotives. In 1930 we bought five more of those. We were hit by a flood in 1927, and all of our line was out of service at various lengths of time from 24 hours to several weeks. When we recovered from that we could [fol. 1148] run big power over practically all our main tracks.

Q. Did you say 1927 or 1937?

A. 1927. By 1930 we could run big engines over all our main lines. By "big engines" I refer to the Berkshire and Santa Fe type locomotives. In 1936 we bought five mountain-type engines, we bought five more in 1937. Each of

these acquisitions of a larger type engine has increased our tractive effort and resulted in our ability to run bigger trains over a greater part of the railroad.

Q. Did that have any effect upon train speed?

A. Our train speed, as shown on Exhibit 87, increased at the same time. We had a 10.2 in 1922 miles per hour, and 13.8 in 1939. That, of course, and the ability to take advantage of what we were given to do business with accounts for the increase in our efficiency and the decrease in our expenses.

Q. Where do you find the index of efficiency, or, if there is more than one, where do you find the indexes on Exhibit 87?

A. On Exhibit 87 I refer to line 8, "Gross Ton Miles per Freight Train-Hour" which increased from 1922 to 1939, 144.9 per cent.

Q. You speak of the bridges, of larger power and in [fol. 1149] crease of strength of bridges. Has there been any betterment of the roadbed and fixed structures otherwise?

A. Yes, sir.

Q. What is the standard weight of rail on your main lines at the present time?

A. Our standard at the present time is 112 pound rail. We have, however, many miles of 130 pound rail.

Q. Does that 130 pound and the 112 replace older rail of lighter weight?

A. Yes, sir, it replaced 85 and 100 pound rail.

Q. Have you been furnished with copies of Defendant's Exhibits 5 and 6 showing the locomotive types on the Southern Pacific?

A. Yes, sir.

Q. You made some reference to your own locomotive types. Has the larger power that you have acquired since 1922, according to your testimony, corresponded to any of the types of locomotives shown on Exhibits 5 and 6?

A. Yes, sir, I refer to the consolidation type engine that we had in service in 1922 and prior to 1926 and that is very similar to the 2-8-0 type shown on the sheet. Our engine [fol. 1150] had a tractive effort of 48,200, which is slightly larger, or ten per cent larger than the engine shown. I referred to the 2-10-2 type engine, which is the first large engine we bought. They are similar to the large 2-10-2

shown on the exhibit. Our engine had a tractive effort of 71,300 pounds without the booster which is slightly smaller than the Southern Pacific engine. We have a booster on those engines which gave us a total tractive effort of 84,500. We also have a Berkshire-type engine that is not shown on here, 2-8-4 type, which has a tractive effort of 66,550, with a booster, adding 12,000 pounds. On the Southern Pacific's exhibits, passenger power, we have a mountain-type engine in freight service with a tractive effort of 67,000 pounds, which is about 15 per cent higher than the Southern Pacific mountain engine in passenger service.

Q. Do you have any articulated type of locomotive?

A. No, sir, we do not.

Q. The Berkshire-type and the large mountain type, are the largest types of freight locomotives you use at the present time?

A. The three types, the Santa Fe, Berkshire and the mountain, all very close as far as the tractive effort is concerned. [fol. 1151]

Q. What locomotives do you use in passenger service?

A. Our principal locomotives are the Pacific type, 4-6-2 type. We have three sizes of those engines. Our smallest size has a tractive effort of 31,600, which is slightly larger than the P-5 of yours. Our next size has a tractive effort of 37,600, and is equipped with a booster which gives it additional tractive effort of 9,375, making almost 47,000, which is larger than the Southern Pacific, larger engine, while our biggest Pacifics have a tractive effort of 40,900 and are equipped with a booster of 11,900 additional tractive effort.

The Court: Gentlemen, it is quite evident you will not be able to finish the examination of this witness tonight. I notice that Colonel Green has returned, and if you can complete his testimony—

Mr. Mason: May we excuse Mr. Hammond until next Tuesday morning?

The Court: Yes, Mr. Hammond, the Court will excuse you until next Tuesday morning, but I suggest that these records be made available to counsel.

[fol. 1152] Mr. Mason: They will be. May the record show that we expect to offer through Mr. Hammond an exhibit predicated upon the use of train-sheets, and that the

train-sheets are being made available today to Mr. Strouss in advance of the offer of the exhibit.

(Witness excused.)

F. W. GREEN resumed the witness stand for further cross-examination as follows:

Cross-examination.

By Mr. Strouss:

Q. I think Colonel Green was going to get some information that he wanted to state to the Court.

The Court: Have you secured the information, Colonel Green?

A. Yes, sir.

The Court: All right. You may state it.

A. (Reading:) April 13, 1939. Train 19, Engineer 811, Engineer Flynn handling 26 loads, 56 empties, moving at a speed of 40 miles per hour at mile-post 131, the train parted at PFE 35920, causing 15 minutes delay. Cause undetermined as inspection of car and track showed no defects. The same train, same date, at Mile Post 179, moving at 40 miles per hour, train parted at car P. F. E. 50382, twenty-five cars ahead of caboose, ten minutes delay. Cause undetermined as inspection of car and track showed no defects.

April 16, 1939. No. 19, engineer, 813, Engineer Rabeneck, handling 40 loads, 40 empties, moving 45 miles per hour, at Mile Post 171, train parted at DT&E 27056 located 41 cars from caboose, causing 25 minutes delay. Crew advised unable to determine cause and inspection of track and cars showed no defects.

Mr. Mason: You say "parted at DT&E 27056." That is the initial and number of the car?

A. Immediately preceding the break, yes, sir.

The Court: Will you give counsel a copy of that?

A. Yes, sir.

[fol. 1154] Q. This exhibit No. 74, in order that it may be perfectly clear, it shows a subdivision between perishable loads and other loads in the heading, but down in the

body of the exhibit you show no perishable loads. What is the reason for that?

A. Because my information was to the effect that the information shown on this exhibit would have to conform to the information supported by the train sheets. The train sheets make no separation between perishable loads and nonperishable, and therefore I didn't show the perishable loads there, but showed them under column B.

Q. Do you know of your own knowledge whether it is likely that there were perishable loads in any of these east-bound trains?

A. Yes, the original exhibit that we made up and didn't introduce showed that through this same ten-day period between Pine Bluff and Jonesboro, out of the total loads handled, 559 were perishable, and for the same period between Jonesboro to Illmo, 493 of the total loads were perishable, and between Illmo and East St. Louis, 497 of the loads handled were perishable.

Mr. Mason: That is all.

The Court: Any further examination of this witness? [fol. 1155] Mr. Strouss: No.

The Court: Then may he too with his records be permanently excused?

Mr. Strouss: Yes.

The Court: It is so ordered. There is just one other question, gentlemen, before we close. I am just making an inquiry of counsel for the defendant for information. I don't know how many Class 1 railroads there are in the United States, but I have been making some statistics of my own off the record here and at the close of nine days' actual trial in which we have had the examination of twenty-six witnesses, we have covered thirteen different roads. I merely wanted to know on how many of these Class 1 roads you intended to bring witnesses here to testify with reference to their operations, because I take it I am not saying that the Court will—but I take it that this testimony is largely cumulative, and while it might be entirely proper to permit you to offer testimony as to all your connecting carriers, I take it the Court would have some discretion in limiting it due to the fact that it is largely cumulative, if it were to go to any great extreme.

Mr. Booth: The Union Pacific, which is our direct connection—

[fol. 1156] The Court: I am counting the Union Pacific as one.

Mr. Booth: Four others, the Milwaukee—

The Court: Three others then besides the Union Pacific.

Mr. Booth: The Milwaukee, Chesapeake and Ohio, and Santa Fe, and Burlington, four others.

The Court: Mr. Triem, counsel has indicated that he wants to finish with your cross-examination to save you from staying here until Tuesday. The court, even though it is overtime, will hear you. Resume the witness stand.

Mr. Strouss: I don't intend to go into those wheel reports because they would give me no information anyhow.

W. R. TRIEM was recalled to the stand and testified further as follows:

Cross-examination (Continued.)

By Mr. Strouss:

Q. Mr. Triem, on the divisions which are covered by your exhibit of typical examples of freight operation, how many tracks do you have in those divisions?

[fol. 1157] A. Except for the branches, we have two or more tracks on all the main lines for which information is given on this exhibit.

Q. And the branch down at Benwood, is that operated more in the character of double track?

A. No, that is a single track line operated under manual block system.

Q. It doesn't go down one side and back the other side of the river?

A. No.

Q. Is there quite a bit of iron ore carried down there to the steel mills?

A. Yes, there is a good deal of iron ore distributed on both sides of the river.

Q. Now, with reference to your cars, how many freight cars has the Pennsylvania Railroad?

A. 236,000. May I check it?

Q. Approximately?

A. It is about that.

Q. Of course, they are not all of 1940 vintage?

A. No, they are not, of course.

Q. In referring to the similarity to the Southern Pacific cars, you mentioned that you have cars that are being operated that were constructed back in—how far back?

A. I am not able to answer that question.

[fol. 1158] The Court: A witness for the Southern Pacific testified, I believe, that they had some very few cars in operation that were built in 1909. Would you say yours went that far?

A. No, I have in mind, Your Honor, 1913 as about the oldest car that we would have on our railroad.

Mr. Strouss: Of course, all of the improvements have not been placed on all cars.

A. That is correct.

Mr. Strouss: I think that is all the questions. I do want to now again ask for the train sheets covering this operation, and if they fail to produce them I ask that the exhibit be stricken and the testimony with respect to it.

Mr. Booth: The defendant tenders an exhibit with reference to certain typical trains. We have made no effort to prove all of the trains that were operated in those districts on certain days. These train sheets are not under the defendant's control, so it does not fall within any rule that evidence in the defendant's control must be produced. The witness, if it is true, is subject to the jurisdiction of the court, but it is shown that the train sheets are not in the possession of the witness.

[fol. 1159] The Court: As I understand the situation, the exhibits now in evidence were not compiled from the train sheets.

Mr. Booth: They were not compiled from the train sheets.

The Court: The motion will be denied.

Mr. Strouss: I want to say that the period of course has been selected by the witnesses and this permits them to select the trains as well as the periods.

Mr. Booth: The witnesses testified it didn't include many trains that were actually run.

The Court: We don't want to cut short your vacation in sunny southern Arizona, Mr. Triem, but you may be permanently excused now.

(Thereupon the court stood at recess until Tuesday, December 10, 1940, at 10 A. M.)

[fol. 1160] December 10, 1940, 10:00 o'clock A. M.

All parties being represented as heretofore noted, the proceedings were resumed as follows:

The Court: I believe we had finished with the witness who was on the stand. Call your next witness.

Mr. Mason: At the adjournment, your Honor, we had finished with Colonel Green, but we had withdrawn Mr. Hammond temporarily.

The Court: He may resume the witness stand.

Mr. Mason: Before we proceed with Mr. Hammond, I will ask Mr. Strouss to refer to page 1152 of the transcript, in Colonel Green's testimony on last Friday, wherein reference is made to the train parting at P. F. E. 35920. That is lines 23 and 24. Have you the place there, Mr. Strouss?

Mr. Strouss: Yes.

Mr. Mason: Colonel Green received telegraphic information after the conclusion of the trial day as to the location of P. F. E. 35920 in that train; and he asked me to ask your consent to supplement his testimony by that statement. I have the telegram here.

Mr. Strouss: By which statement?

Mr. Mason: The location of that car in the train at the [fol. 1161] time of the parting. You remember as to each of the other train partings, the location of the car in the train is shown. I would simply make the statement from the telegram that Colonel Green received.

Mr. Strouss: That is subject to my running objection.

Mr. Mason: Yes. This simply has to do with those break-in-two's which were checked from his train sheets.

The Court: It is hearsay. If counsel objects on that ground, I will have to sustain it.

Mr. Strouss: No.

Mr. Mason: It is supplementary to the information already given.

Mr. Strouss: No, I have no objection on the ground of hearsay.

Mr. Mason: The location of this particular car, mentioned in lines 23 and 24 on page 1152, according to Colonel Green's advice, was the 23rd car from the caboose.

[fol. 1162] RUSSELL J. HAMMOND was recalled to the stand and testified further as follows:

Direct examination (Continued.)

By Mr. Mason:

Q. At the conclusion of your testimony on last Friday, I think that you had completed your comparison of the locomotives presently owned and operated by the Boston and Maine with the locomotives shown on Defendant's Exhibits 5 and 6. Now, will you refer to Defendant's Exhibits 2 and 3. I think copies of those have been supplied to you, have they not?

A. Yes, sir.

Q. Does the Boston and Maine own and operate freight cars of its own ownership?

A. Yes, sir.

Q. Have you familiarized yourself in the course of your duties with the type, design and construction of those freight cars?

A. Yes, sir.

Q. And will you say whether or not the freight cars owned and operated by the Boston and Maine, that is to say, the box-cars, conform generally in design and construction to those indicated by Exhibit No. 2?

[fol. 1163] A. Well, we haven't gone as far in the development of box-cars as the Southern Pacific. We have no all-steel cars. We have the steel underframe with wooden body, both single and double sheath bodies. The capacities are not as great; the 80,000-capacity car is our standard car. Our requirements for our own on-line loading do not require the size car of the Southern Pacific. It should be remembered that the Boston and Maine is a terminating carrier. We receive better than two cars, two loads, for every load off-line, so that we have a large number of foreign cars at all times available for off-line loading. While we only own, at the present time, approximately 6500 freight cars, we have on the line between 11,000 and 13,000 cars daily.

Q. Does the Boston and Maine have any wooden underframe cars in regular service?

A. No, sir.

Q. All of your cars have steel underframes?

A. Yes, sir.

Q. Will you refer to the exhibit showing passenger-car design on the Southern Pacific, Exhibit No. 4?

A. Yes, sir.

[fol. 1164] Q. And state whether the development of passenger-car design of Boston and Maine owned passenger cars has been along somewhat similar lines?

A. Very similar, except we have only the four-wheel trucks, and we have no articulated units except the streamlined train.

Q. Do you operate a streamlined train in regular service?

A. Yes, sir.

Q. Between what points?

A. Jointly with the Maine Central between Boston and Bangor.

Q. Is that a daily service?

A. A daily service, yes, sir.

Q. The passenger-carrying units in that train, do they resemble anything on Exhibit No. 4?

A. Well, that is an articulated three-car train.

Q. Does your passenger equipment other than for the two-wheel truck design, generally conform in design to that shown on Exhibit No. 4?

A. Yes, sir.

Q. Other than the articulated unit?

A. Yes, sir, other than the articulated unit.

Q. Do you have any all-wooden passenger cars in service today?

A. No, sir, we have steel underframe cars and all-steel cars, no all-wooden cars.

Q. Does the Boston and Maine have any districts or territories where the grades are such as to require additional locomotive power other than a single locomotive, to handle the ordinary train?

A. Yes, sir.

Q. Where are those districts with reference to your map?

A. We have helper service eastbound from East Deerfield to East Gardner, which, on the map, is where the heavy lines going toward Worcester out of Mechanicville as far as Johnsonville, a distance of thirteen miles. On the same route we have helper service from Fitchburg to

East Gardner, a distance of about ten miles, and from East Deerfield west to Shelbourne Falls, a distance of about thirteen miles. We also, on the Worcester to Portland Line, use helpers between Worcester and Ayer.

Q. In general, what ruling grades exist in the helper districts which compel the use of helpers?

A. Well, eastbound, the grade between East Deerfield [fol. 1166] and East Gardner is 1.17; westbound, the grade between Fitchburg and East Gardner is about 1.23; and the grade between East Deerfield and Mechanicville westbound is a one per cent grade.

The Court: What is the maximum grade, Mr. Hammond, on any of the lines?

A. On any of our lines, we will run up in our mountain district to approximately one and a half per cent. On this heavy-traffic line it is 1.23.

Mr. Mason: Do you have mountain operations in Vermont or New Hampshire?

A. In New Hampshire, the White Mountains.

Q. What is the maximum elevation reached at any point on the line?

A. I don't think I can answer that, Mr. Mason. These condensed profiles don't show the elevation.

Q. I think you spoke of the principal traffic lines. Now, will you refer to Exhibit 85, the map, and state which are the principal traffic lines?

A. Our heaviest freight line is the line between Mechanicville and Boston. The next to that is the line from Boston to Portland, in part of which the traffic between Worcester and Portland passes.

[fol. 1167] Q. On your runs between Mechanicville and Boston, do you run the same locomotive all the way through or change out at intermediate points?

A. It is a through engine and crew run, Boston to Mechanicville.

The Court: What is the distance?

A. 187 miles.

Mr. Mason: Do you run the same crew and engine between Boston and Portland?

A. Yes, sir.

Q. What is the distance?

A. 115 miles.

Q. Do you have any through trains between Worcester and Portland by Ayer?

A. Yes, sir.

Q. Is that a through run?

A. Yes, that is a through run.

Q. What distance?

A. Approximately 140 miles.

Q. That run crosses Massachusetts, New Hampshire, and into Maine, does it?

A. Yes, sir.

Q. Do you have any runs longer than the 187 miles between Mechanicville and Boston?

A. No, sir, that is the longest run.

[fol. 1168] Q. You spoke of the Boston and Maine being largely or predominately a delivering line or terminating line. Does your company originate a substantial volume of traffic?

A. Yes, sir.

Q. Have you prepared from the annual report to the Interstate Commerce Commission for the year 1939 an analysis of the traffic carried?

A. Yes, sir.

Q. Do I understand that this analysis relates particularly to the perishable traffic carried?

A. Yes, sir.

Q. And contains a grand total of all carload traffic carried?

A. Yes, sir.

Q. This is a statement in one sheet bearing title "Boston and Maine Railroad, Revenues Freight Carried during the Year 1939"?

A. Yes, sir.

Q. And is a correct transcript of the information appearing in certain schedules of the annual report to the Interstate Commerce Commission for that year?

A. Yes, sir.

Q. Will you refer to those schedules by number, that is, the general schedules?

[fol. 1169] A. It is Class 110 to 143.

Q. On what pages?

A. Mr. Strouss has my 1939 report.

Q. Is it a portion of schedule 541 as you recall it?

A. Yes, sir.

Mr. Mason: May we have this statement marked for identification.

The Court: It may be marked.

The Clerk: Defendant's exhibit No. 88 for identification.

Mr. Mason:

Q. Has the exhibit been checked against the annual report to determine whether these figures are correct?

A. Yes, sir.

Q. Are these figures taken entirely from the annual report and without any summation or computation of your own?

A. The only computation of my own is the addition of Classes 110 to 143.

Q. That is in the line on the exhibit reading "Total Classes 110 to 143, Inclusive"?

A. Yes, sir.

Q. That is a computation from the preceding figures?

A. Yes, sir.

[fol. 1170] Q. Will you say whether or not the exhibit is true and correct to the best of your knowledge and belief?

A. It is.

Mr. Mason: We offer the statement in evidence as exhibit No. 88 subject to any questions which Mr. Strouss may have before the exhibit is received.

Mr. Strouss: I have no questions but the same objection.

The Court: The objection is overruled, it may be admitted in evidence. I take it that the reports from which this exhibit is compiled are here in court?

Mr. Mason: I understand that they are in the possession of opposing counsel.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 88.")

Mr. Mason:

Q. Mr. Hammond, I call your attention to the figures appearing in the total classes 110 to 143 and especially to columns C and D. What is the total of the two columns C and D in Classes 110 to 143? Have you that figure readily at hand?

A. Yes, sir, 2,194.

Q. That is 2,194 carloads of these particular products, of agricultural perishable products which originate on your [fol. 1171] railroad, is it?

A. Yes, sir.

Q. You have undertaken by these various Classes 110 to 143 to include only so-called "perishable agricultural products"?

A. Only items covered by these classifications.

Q. Have you readily at hand or can you calculate the totals shown for Classes 110 to 143 for columns E and F?

A. 47,003.

Q. What total carloads does that represent?

A. That is the carloads from connections either terminating on line or delivered to other connecting lines.

Q. That represents business as to which you are either a terminating or a bridge carrier participating in a haul of traffic originated by other carriers?

A. Yes, sir.

Q. What is the principal description of the perishable agricultural traffic which the Boston and Maine handles?

A. The largest single commodity is potatoes.

Q. What is the next most important?

A. Oranges and grapefruit.

The Court: I take it those come to you by boat?
[fol. 1172] A. Potatoes?

The Court: No, the citrus and the bananas.

A. The bananas come by boat but the citrus comes by rail.

Mr. Mason: As to the bananas, the exhibit indicates that only ten of some 1,584 carloads were received from connecting carriers.

A. That is right.

Q. How does it come that you originate so many carloads of bananas?

A. The United Fruit Company has sailings into Boston regularly twice a week, in the summer season three times a week. Those bananas are loaded at shipside for distribution over our lines through New England and into Canada.

Q. Those are reported as originating on lines as far as you are concerned as a railroad?

A. Yes, sir.

The Court: Where is your connection with the citrus?

A. Most of it is through Mechanieville. There is some southern fruit that comes at Worcester, but the bulk of it is western fruit.

Mr. Mason:

Q. You are shown here as receiving some 1,780 earloads of grapes from connections. At what point is that received?

[fol. 1173] A. That would be Mechanieville, western California grapes.

Q. What railroad or railroads deliver this western perishable production to you at Mechanieville?

A. Our direct connections are the New York Central, our interchange point being Rotterdam, but the New York Central train running directly into Mechanieville.

Q. Are the two points closely adjacent?

A. They are 23 miles apart and the D. & H., Delaware and Hudson, at Mechanieville.

Q. Do you have any schedules relating to the transportation of freight originating at Mechanieville and moving to terminal points on your line?

A. Yes, sir.

Q. Do those contemplate regularly scheduled departures of freight trains from Mechanieville?

A. Yes, sir.

Q. What are the hours of those departures?

A. The first train is MB-2, leaving Mechanieville at 7 o'clock; RB-2 at 11 o'clock; RB-4 at 3:45; MB-6 at 6 o'clock, the regular Mechanieville-Boston daily trains.

Q. What was the first departure that you spoke of?

[fol. 1174] A. 7 o'clock.

Q. What time is that train scheduled to arrive at Boston?

A. That train is scheduled to arrive at Boston at 4:30 P. M.

Q. What is the next departure?

A. 11 o'clock.

Q. When is that scheduled to arrive at Boston?

A. 8 o'clock that night.

Q. Then the third was at 3:45 P. M.?

A. Due at Boston at 11:55 that night.

Q. And the final departure?

A. The 6 o'clock train is due at Boston at 3 o'clock in the morning.

Q. Do you have scheduled trains between Boston and Portland?

A. Yes, sir.

Q. And between Worcester and Portland also?

A. Yes, sir.

Q. What are your schedules between Boston and Portland?

A. Our fast train is out of Boston at 7:05 P. M., due at Portland at 10:30 P. M.

Q. What is the distance there?

A. That is 113 miles for a freight train.

Q. And the second train from Boston, do you have [fol. 1175] another train from Boston to Portland?

A. We have another regular scheduled train which does the intermediate work which is due out of Boston at 9:30 at night, which does intermediate work all the way to Portland.

Q. You spoke of schedules between Worcester and Portland?

A. Yes, sir.

Q. What is the scheduled departure time from Worcester?

A. We have a train out of Worcester at 2:20 A. M., due at Rigby, the freight terminal for Portland, at 10 A. M.

Q. What is that distance?

A. 144 miles.

Q. And the elapsed time is how much?

A. 7 hours and 40 minutes. In the opposite direction we have a train out of Rigby at 4:45 P. M., due at Worcester at 10 P. M. for Harlem River delivery at 7 o'clock next morning. That is five hours and fifteen minutes elapsed time.

Q. Does the Boston and Maine ever handle Pacific Fruit Express cars?

A. Yes, sir.

Q. Do you handle refrigerator cars of other ownership? [fol. 1176]

A. Yes, sir.

Q. Do you operate any Pullman cars on your passenger trains?

A. Yes, sir.

Q. What type of Pullmans are they?

A. The standard Pullmans of all classes.

Q. Have you before you a statement in one sheet entitled "Boston and Maine Railroad, Typical Examples of Freight Trains Handled"?

A. Yes, sir.

Mr. Mason: May we have this statement marked No. 89 for identification?

The Court: It may be marked.

The Clerk: Defendant's exhibit No. 89 for identification.

Mr. Mason:

Q. Did you prepare exhibit No. 89 for identification?

A. It was prepared under my supervision.

Q. In your office?

A. In my office.

Q. From what sources was it prepared?

A. The train sheets.

Q. Are those the train dispatchers' train sheets for these districts and for the period covered by the exhibit?

A. Yes, Mr. Strouss has them.

[fol 1177] Q. Have they been furnished to opposing counsel?

A. Yes, sir.

Q. The exhibit indicates that the period studied was a ten-day period during September 1939?

A. Yes, sir.

Q. Who selected that period?

A. I did.

Q. For what reasons?

A. Because it represented an average normal period.

Q. Does the Boston and Maine have any particular peaks of freight traffic and periods when the freight traffic is at a minimum?

A. Yes, sir, we have two peaks.

Q. What are those?

A. Normally one peak in March with the last week in March being the spring peak, and the other peak in October with the last week in October being the peak.

Q. When are your periods of minimum traffic?

A. The minimum traffic is the New Year period and the July period.

Q. Will you say whether or not the period during the second half of September represents a reasonably typical [fol 1178] average of the year's business?

A. It is an average of the year's business.

Q. Who selected the districts on the lines to which the study relates?

A. I did.

Q. What was your reason for making that selection?

A. It is representative of our operation.

Q. Are the districts selected shown in the heavy line on exhibit No. 85?

A. Yes, sir.

Q. I notice you include the Mechanicville-Boston, Worcester-Portland, and the Boston-Portland districts?

A. Yes, sir.

Q. And certain others?

A. Also the Springfield-White River.

Q. What is the nature of the traffic on the Springfield-White River line?

A. General commodities. It is the connection or a link of the connection between Pennsylvania and the South and Canada.

Q. Is White River Junction a junction with some other important connection of yours?

A. White River Junction is the junction with the Central Vermont Railroad which is a part of the Canadian National system.

Q. Springfield is a junction of what character?

A. Boston and Albany and the New Haven.

Q. Has the information shown on exhibit No. 89 for identification been compared with the original sources?

A. Yes, sir.

Q. Has it been checked?

A. Yes, sir.

Q. Will you say whether or not it represents that information correctly?

A. It does.

Q. What kind of trains do you show on exhibit No. 89?

A. Through trains.

Q. Do you include any of the so-called "local trains"?

A. No, sir.

Q. Are all of these trains shown trains which operate from the terminal shown in the left-hand column to the terminal shown in the right-hand column, that is, columns B and C?

A. Yes, sir.

Q. Did you say whether or not the exhibit is true and correct?

A. Yes, sir.

[fol. 1180] Q. This information as to ruling grade, from what documents was that obtained?

A. The company profiles.

Q. Are those available here?

A. I offered them to counsel Friday afternoon and he declined so they are in the hotel room now.

Q. They have been made available?

A. Yes, sir.

Mr. Mason: Have you some questions, Mr. Strouss?

Mr. Strouss:

Q. The train sheets which were given to me, Mr. Hammond, covered only the ten-day period which is covered by your exhibit?

A. Yes, sir.

Q. And no other train sheets are here or have been tendered?

A. Only just for this ten-day period.

Q. What do you mean by "through trains" as used in this exhibit?

A. Trains which run from a major terminal to a major terminal. They may pick up at intermediate points but they do not do local station switching.

Q. Just pick up cars but not switching?

A. Not switching.

Q. In your columns B and C you have set forth stations from and to which trains operated?

[fol. 1181] A. Yes, sir.

Q. Is a train which operated between the stations indicated in each instance considered by you a through train if it did not do local switching?

A. If it did not do local switching, it was a through train, yes, sir.

Q. And it would be on this exhibit?

A. Yes, sir.

Mr. Strouss: That is all.

Mr. Mason:

Q. Would local trains be shown on the train sheets in addition to those through trains?

A. All trains are on the train sheets.

Mr. Mason: We now offer the exhibit as defendant's exhibit No. 89.

Mr. Strouss: Same objection.

The Court: Objection overruled, it may be admitted.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 89.")

Mr. Mason:

Q. Mr. Hammond, I notice in columns B and C you have shown the name of Rigby, Maine, several times?

A. Yes, sir.

Q. What is Rigby with relation to Portland, Maine?

[fol. 1182] A. It is about 3 miles west of Portland; it is the freight terminal for Portland.

Q. Did you from the train sheets make any check of the trains operated during the ten-day period studied on this exhibit with relation to the schedules under which they were operating and the times made on such schedules?

A. Only in a very general way as I went over the train sheets, in checking over naturally I watch about the time they got into the terminal because it is a matter of habit.

Q. You didn't make any other particular check of the particular trains here between Boston and Mechanicville, for example?

A. No, sir.

Q. Did you make any check of the trains between Boston and Mechanicville otherwise during the past year or two period with respect to the actual time enroute and the cars handled in such trains?

A. Of course I make that comparison constantly every day on account of our connections and deliveries.

Q. You make a check of the number of cars handled as well as the maximum and minimum in the trains?

[fol. 1183] A. We watch the loading of our locomotives.

Q. Do you make a check of the performance as related to the schedule?

A. Daily.

Q. The type of locomotives shown on this exhibit, Mr. Hammond, are those the same type that you were discussing in your references to defendant's exhibit 5 and 6?

A. Yes, sir.

Q. Refer to line 6 of your exhibit, Mechanieville to Boston. You show a total of 18 trains in the block 71 to 100 cars and 5 trains in the block 101 to 125 cars?

A. Yes, sir.

Q. In the same period on line 7 you show 18 other trains handled with a different type of locomotive. Were those segregations merely made according to types of locomotives of trains operating on the same day and between the same points?

A. Yes, sir.

Q. These 23 trains operated with the Mountain type were not a particular schedule during that ten-day period, were they?

A. No.

Q. You have segregated trains between the same points according to locomotive types in the various lines as well as [fol. 1184] according to length in the various columns?

A. That is correct.

Q. Are the trains operated throughout the year generally the same according to length as are indicated by exhibit No. 89?

A. Generally. Of course your length is going to depend upon your commodities and your weather.

Q. You spoke of length depending upon commodities. Do you mean that you operate shorter trains or longer trains according to the loading and the cars to be handled?

A. Our trains are based entirely on the tonnage rating of the engine, tractive power of the engine, and it wouldn't take as many cars of hundred tons to make up a 4,500-ton train as it would cars of fruit and merchandise.

Q. Are fruit and merchandise lighter loading on the average than other commodities?

A. Yes, sir.

Q. Then if you have a yard at Mechanieville full of fruit and merchandise cars to be handled eastward can you make up longer trains than if you had a yard full of coal or steel?

A. You could if that was the condition.

Q. Does that condition ever obtain?

[fol. 1185] A. No, sir.

Q. Are there any other considerations which govern the lengths of the trains that you operate besides the tonnage in the cars?

A. The tonnage in the cars and the weather.

Q. What is the effect of the weather?

A. In stormy weather you cannot handle as great a tonnage with your engine as you can in good weather.

Q. Is that because of the effect of the temperature upon the capacity of the locomotive?

A. It is not so much temperature as it is snow and wet rail.

Q. Do you ever have to limit the length of your trains operating on particular schedules because of the lack of sufficient tonnage to fill out the tonnage rating?

A. We occasionally have light trains.

Q. I call your attention to a statement in one sheet entitled "Boston and Maine Railroad, Maximum Number of Cars Handled in Portland and Fitchburg Division Passenger Trains, September 17th to 26th, Inclusive, 1939."

A. Yes, sir.

Q. You have that statement before you?

A. Yes, sir.

[fol. 1186]. Mr. Mason: May we have the statement just referred to marked No. 90?

The Court: It may be marked.

The Clerk: Defendant's exhibit No. 90 for identification.

Mr. Mason:

Q. Did you prepare this statement, Mr. Hammond?

A. It was prepared under my supervision.

Q. From what sources?

A. From the train sheets.

Q. Are those the same train sheets which were used in the preparation of exhibit No. 89?

A. Yes, sir.

Q. They have been furnished to opposing counsel for his examination?

A. Yes, sir.

Q. Has the exhibit been compared against the original sources?

A. Yes, sir.

Q. Do you know whether it is true and correct?

A. It is.

Q. The computations I take it in the recapitulation are your own?

A. They were made in my office.

Q. Made from the face of the exhibit?

A. Yes, sir.

[fol. 1187] Q. The total indicates maximum number of cars handled. Does that mean the maximum consist of the trains studied, of each train studied at any point enroute?

A. Yes, sir.

Q. Do your through passenger trains set out or pick up cars at intermediate points to any great extent?

A. Not to any great extent, although there are trains on this exhibit that did or would ordinarily set out and pick up cars at one or two points.

Q. This I note is the same period as used for the freight train study. Was this your own selection?

A. Yes, sir.

Q. Why did you use this same period for a passenger train study?

A. It is representative of an average period.

Q. Is there any peak of passenger traffic during the month of September?

A. Yes, the Labor Day traffic is a peak.

Q. That is not included here?

A. No, sir.

Mr. Mason: Have you any questions, Mr. Strouss?

Mr. Strouss: No.

[fol. 1188] Mr. Mason: We offer the exhibit in evidence as No. 90.

Mr. Strouss: The same objection.

The Court: Objection overruled, it may be admitted.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 90.")

[fol. 1189] Mr. Mason: I would like you to refer again to Exhibit 87. That is the freight service operating averages?

A. Yes, sir.

Q. I notice that in line 3, you show that the average freight cars per freight train has increased from 31.3 in 1922 up to a figure of 51.1 in 1939?

A. Yes, sir.

Q. Although Exhibit 89 indicates that through trains, during the period stated, had consists varying from those shown, average consists varying from those shown in Column D, group of seventy cars and less, to as much as 137 cars, as indicated by Column I-I at the extreme right.

A. Yes, sir.

Q. Does your company operate any substantial local freight-train service?

A. Very heavy local freight service.

Q. Do you have considerable branch-line mileage?

A. Yes, sir.

Q. What is the character of the freight-train service on those branch lines?

A. Local freight trains doing station-to-station work.

Q. Do those local freight trains ordinarily exceed seventy cars in length?

A. Ordinarily, no.

Q. What would be the length of the typical branch-line freight train, according to your best experience?

A. Well, they run anywhere from ten or fifteen cars up to thirty-five or forty.

Q. Why do they not exceed the length you have just stated?

A. Because, they are based—the territory they cover is based on the work they can do in a given eight-hour period, or seven hours and forty minutes.

Q. Is there traffic available to enable you to handle or to operate longer trains on these branch lines?

A. A local freight train has to do the switching at each of the stations, work on the branch lines at stations; while the branch itself might have traffic enough, it would not be feasible to do the local switching with a longer train, neither could they serve the number of stations in the day's work to cover the long train.

Q. Now, do you have local trains on the main line as well as on the branches?

A. Yes, sir.

[fol. 1191] Q. Do you have more or less than seventy cars?

A. They are mostly short trains. They would run—our local trains out of Boston would average somewhere around twenty-five cars.

Q. Do those cars perform a gather or pick-up service as well as delivery service?

A. Yes, they deliver, do the pick-up and station placement.

Q. Do those local trains enter into the computation of the average-train lengths shown on Exhibit 87?

A. Yes, sir.

Mr. Mason: May we have our morning recess at this time?

The Court: Yes, we will take a recess of ten minutes.

(Thereupon a short recess was taken, after which the witness was recalled to the stand and proceedings were resumed as follows:)

Mr. Mason: Mr. Hammond, in the course of your preparation of Exhibit 89, did you make any check of the trains shown on that Exhibit; moving from Mechanicville to Boston, and between certain other points on the schedules to which you referred earlier in your testimony?

A. Yes, sir.

[fol. 1192] Q. You referred, I think, to schedule which you designate as the R. B. 2 from Mechanicville to Boston.

A. Yes, sir.

Q. Did certain trains from Mechanicville to Boston move on that schedule during the ten-day period covered by Exhibit 89?

A. Yes, sir.

Q. And from the train sheets, did you check the number of cars in the train in the R. B. 2 schedule?

A. Yes, sir.

Q. What was the minimum number, the maximum number, and the average number of cars handled?

A. They varied from 76 to 90 cars, with an average of 88 cars.

Q. That is on the R. B. 2 schedule?

A. Yes, sir.

Q. What is the running time from Mechanicville to Boston on that schedule?

A. Nine hours.

Q. Now, did you check the R. B. 4 Schedule from Mechanicville to Boston?

A. Yes, sir.

Q. What was the minimum and the maximum and the average number of cars per train on that schedule?

[fol. 1193] A. That varied from 76 to 90 cars with an average of 81.

Q. Is that R. B. 4 Schedule one in which perishable traffic coming from the west is handled?

A. Yes, sir.

Q. Did you check also the N. B. 6 Schedule previously mentioned?

A. Yes, sir.

Q. What did you find as to the minimum, maximum and average number of cars on that schedule?

A. That varied from 80 to 109 cars, with an average of 100 cars.

Q. What is the running time on the R. B. 4 Schedule you just mentioned?

A. Eight hours and ten minutes.

Q. And on the N. B. 6?

A. Nine hours.

Q. You spoke also of schedules from Boston to Rigby, or Boston to Portland?

A. Yes, sir.

Q. Did you check those against the train sheets to determine the variation in length and the average number of cars handled?

A. Yes, sir. That seven o'clock train varied from 91 to 110 cars, with an average of 98 cars.

[fol. 1194] Q. What is the running time on that schedule?

A. Three hours and twenty-five minutes.

Q. Now, did you check the schedule from Worcester to Portland, or Worcester to Rigby for Portland?

A. Yes, sir.

Q. What did you find from the train sheets as to the minimum, maximum and average number of cars in the train?

A. The train from Rigby to Worcester varied from 36 to 89 cars, with an average of 63.

Q. And from Worcester to Rigby?

A. From 63 to 131, and an average of 87.

Q. Did you check the schedule from Rigby to Boston?

A. Yes, sir.

Q. What was the minimum, maximum, and average on that schedule?

A. That train varied from 66 to 113 cars, an average of 84.

Q. What is the running time on that schedule?

A. Three hours and forty-four minutes.

Q. Are your schedules from Mechanicville to Boston in any way coordinated with schedules between Chicago and Mechanicville?

A. Yes, sir.

[fol. 1195] Q. What delivery at Boston is provided by these schedules, taking into account the departure from Chicago?

A. Cars leaving Chicago on the six o'clock departure time have both morning delivery in Boston.

Q. You mean the 6 P. M. departure from Chicago?

A. Yes, sir.

Q. Do your schedules connect with those mentioned by the witness, Randall for the Erie?

A. Yes, sir.

Q. Do you know, and, if so, will you state what percentage of on-time arrival or on-time performance you make with your scheduled trains handling this perishable traffic originating in the west?

A. Of course, our on-time arrival is not necessarily arrival of trains at the terminal; it is the time cars are placed for the consignor. We have five o'clock placement for the beef people.

Q. Five o'clock A. M.

A. Five o'clock in the morning. We have a six o'clock placement for the fruit auction, and the seven o'clock for public delivery, general public delivery. So far as the placement is concerned, except in stormy weather, we are [fol. 1196] around 98 per cent.

Q. Now, in achieving placement, there is both the handling over the road, and the terminal handling at Boston to be considered?

A. Yes, sir.

Q. Combining those two you say your percentage of placements in accordance with the requirements you mentioned is 98 per cent?

A. About 98 per cent.

Mr. Mason: I think that is all. Thank you Mr. Hammond.

Cross-examination.

By Mr. Strouss:

Q. How do you define the term "Ruling Grade?"

A. The maximum grade with allowance for curvature on the length of a train, train length.

Q. In the helper district you referred to, the use of a helper will depend upon the tonnage in the train?

A. Yes, sir.

Q. Your road handles a considerable amount of passenger business, doesn't it?

A. Yes, sir.

Q. You have a great many passenger trains?

A. Yes, sir.

[fol. 1197] Q. Other than the ones that are shown on your exhibit?

A. Yes. I only showed the through trains on that exhibit.

Q. What do you mean by through trains with reference to your passenger exhibit?

A. Trains going the length of the division.

Q. It includes trains which make all local stops, as well as—

A. They would make some local stops, yes, sir.

Q. But if a train went the length of a division and made all local stops, would that be included?

A. Yes, sir.

Q. Now, in your Exhibit 89, Mr. Hammond, as I understand it now, all trains that operated during the ten-day period between the points indicated in Columns B and C not doing local switching, are included in the exhibit following the names indicated?

A. Yes, sir.

Q. Now, if there is a train operated between Boston and Mechanicville, that didn't do local switching, it is shown on the exhibit opposite those names?

[fol. 1198] A. Yes, sir.

Q. The same would be true of the other points shown on down through the column?

A. Yes, sir.

Q. If a train operated between East Deerfield and Mechanicville, that is shown opposite those points here on your exhibit?

A. Yes, sir.

Q. Isn't there a duplication there, Mr. Hammond?

A. No, sir.

Q. If the train operates from Boston to Mechanicville, it will operate from Deerfield—

A. Yes, but I haven't shown it that way. The Boston and Mechanicville are trains operating between Boston and Mechanicville. The trains operating between East Deerfield and Mechanicville are trains only operating between East Deerfield and Mechanicville.

Q. A train which operates from Boston to Mechanicville, while it also operates between East Deerfield and Mechanicville, wouldn't be shown on here opposite the points East Deerfield to Mechanicville?

A. No, it is only shown on here once.

Q. It is only shown once?

[fol. 1199] A. Yes, sir.

Q. So there is not a duplication, then, between those two points?

A. No, sir.

Q. On Exhibit 87—I don't remember whether I asked you concerning that exhibit—in Line 1, miles of line operated in freight train service—

A. Yes, sir.

Q.—you show a reduction of about five hundred miles since 1922?

A. Yes, sir.

Q. Is that due to abandonment of unprofitable branches?

A. With one exception. In 1926 we leased or sub-leased 105 miles of line between Wells River, Vermont, and Sherbrooke, Quebec, to the Canadian Pacific. The rest of it is abandonment of unprofitable branch lines. I said 1926; I want to correct that to 1925.

Q. Now, on Friday you testified concerning Exhibit 86, and in connection with the reduction in freight operating expense, freight transportation expense, Columns C and D, you testified that in part, or a considerable part, was due to increase in size of locomotives, running them greater distances and increase in length of train?

[fol. 1200] A. Yes, sir.

Q. Now, isn't it true, Mr. Hammond, that those two columns reflect the total of items 210 to 462, and Column D, Item, or Account 371 to 420 of your Annual Report?

A. Yes, sir.

Q. And the reduction which is shown here is the over-all reduction?

A. That is correct.

Q. Of those accounts?

A. Yes, sir.

Q. For example, in both items there is the item of Station Employees?

A. Yes, sir.

Q. That item was reduced \$1,700,000 in that period, isn't that correct?

A. I don't remember what the figure is; a substantial reduction.

Q. Do you know whether it was something up around that figure?

A. I couldn't say offhand.

Q. That item would be a part of this reduction?

A. Yes, sir.

Q. Which is shown here. And the same would be true of reductions in any of the other items or accounts?

[Vol. 1201]. A. Yes, sir.

Q. A reduction in the items Ties or Rails, that would all be reflected in the reduction?

A. Yes, sir.

Q. Do you have a tunnel operation on that line?

A. Yes, sir.

Q. Is that operated by electric locomotives?

A. Yes, sir.

Q. That is between—

A. The Hoosac, between East Deerfield and Mechanicville.

Mr. Strouss: That is all.

Redirect examination.

By Mr. Mason:

Q. Mr. Hammond, in your definition of ruling grade, I take it that you have in mind a grade which influences the pulling power of the locomotive measured in tons of freight which can be carried over the grade, or tons of weight which can be carried over the grade and excludes short maximum grades which do not influence the tonnage rate?

A. That is right.

Q. You included also the influence of curve?

A. Yes, sir.

Q. Does the curvature of track, combined with the slope [Vol. 1202] of the track, have an influence upon the amount of tons that a locomotive may haul over that particular piece of track?

A. Yes, sir.

Q. The two taken together form the components that go to make up the ruling grade?

A. Yes, sir.

Q. Is it proper to say, then, that ruling grade is that grade which combined with curvature, if present at that particu-

lar point, is of sufficient length and steepness to influence and determine the amount of tonnage which may be handled with a single locomotive or combination of locomotives?

A. Yes, sir, that is right.

Q. Your electric operation, just how do you handle trains in the territory where electric locomotives are used? Do you substitute electric locomotives for steam, or add them to the trains with steam locomotives?

A. They are added to the train. The steam locomotive is hauled through the tunnel with the train by the electric locomotive.

Q. Does the steam locomotive work and add its power to that of the electric locomotive?

A. The steam locomotive starts the train, the electric [fol. 1203] locomotive cutting in at the same time. After the train starts, the steam engine cuts out and idles through the tunnel.

Q. What is the reason for that? Is the tunnel very long?

A. Five miles.

Q. What is the purpose of having the steam locomotive idling?

A. To get away from the smoke nuisance.

Q. Is the grade at the tunnel such as to require helper at either portal or through the tunnel?

Q. No, so far as the ability of the engine is concerned, the engine could take the train through the tunnel, and does if there is any reason to take the electric power off.

Q. This is simply a substituting of electric for steam locomotives through the long tunnel?

A. Yes, to avoid the smoke nuisance.

Mr. Mason: That is all.

Mr. Strouss: That is all.

The Court: May the witness be excused with his records?

Mr. Strouss: Yes.

The Court: Call your next witness.

Mr. Mason: Your Honor, before the witness testifies, we [fol. 1204] have now the reproduced exhibits of certain witnesses, which exhibits were originally offered in typewritten form and without the designation of the court and number, and so forth, at the top. Your Honor will recall there were quite a series of those, and we agreed to substitute copies. I have those and I offer to Court and to counsel numbers 57, the witness Oakley, 61, Witness Millard, 65, Witness Shell,

69, Witness Albert, 70, Witness Gregory, 71, Witness Siddall, 72, Witness Burn. I think there are certain additional exhibits which were offered in the same way, and copies of which will be substituted in due course.

The Court: If there is no objection, the substitution may be made.

Mr. Strouss: I have no objection to the substitution. Of course, retaining my general objection.

The Court: Yes, that is understood.

GEORGE H. WARFEL was called as a witness on behalf of the defendant and being first duly sworn, testified as follows:

Direct examination.

By Mr. Mason:

Q. Did you state your name and residence to the reporter, [fol. 1205] Mr. Warfel?

A. George H. Warfel, Kansas City, Missouri.

Q. Will you state your employment, Mr. Warfel?

A. I am Division Superintendent of the Kansas Division of the Union Pacific.

Q. With headquarters at Kansas City?

A. Headquarters at Kansas City, Missouri.

Q. Over what particular lines of the Union Pacific does your jurisdiction now extend?

A. From Kansas City to Ellis, Kansas, on the main line between Kansas City and Denver, and over the branch line from Salina, Kansas, around to Oakley, Kansas, a point on the main line on the Colorado Division; and from Menoken just west of Topeka, northwestward to Grand Island, Nebraska, connecting with the Nebraska Division. Those are the outer limits of the division.

Q. What is the approximate mileage of your division?

A. 1152.

Q. And that includes how much main line?

A. About 498.

Q. And the balance, I take it, is branch line?

A. Yes, sir.

Q. How long have you been in railroad service, Mr. Warfel?

[fol. 1206] A. I entered the service of the Union Pacific Railroad in August, 1902, left the service August 31, 1904,

and re-entered January 10, 1906, since which time I have been continuously employed.

Q. Been continuously with the company for practically thirty-five years, plus your two earlier years?

A. Yes, sir.

Q. Will you describe, briefly, what your experience has been in the various positions you have held?

A. I entered service as a laborer in the Signal Department; and progressed as a battery man and as a signal maintainer, assistant signal supervisor, assistant roadmaster, district roadmaster, general roadmaster on the Kansas and Nebraska Divisions, and for a period of three months in 1925 was assistant trainmaster. Then in January, 1927, I was made assistant to the general manager in charge of safety, and later, when my jurisdiction was extended to all units of the system, assistant to the operating vice-president in charge of safety, which position I held until February, 1935, when I was made assistant superintendent of the [fol. 1207] Nebraska Division at North Platte. In February, 1937, I was made superintendent of the Wyoming Division at Cheyenne, at the time when the territory between Omaha and Ogden was divided into three divisions. At the end of that year, the territory between Omaha and Ogden was again restored to only two operating divisions, at which time I was returned to North Platte as assistant superintendent, and remained there in that position until March 15, 1939, when I was made superintendent of the Kansas Division.

Q. When you were assistant to the general manager and later assistant to the operating vice-president, Mr. Warren, what was the extent of your jurisdiction?

A. Over all lines of the Union Pacific System.

Q. Did that include the lines as far west as Seattle, Spokane, and Los Angeles?

A. Yes, sir.

Q. Were your headquarters then at Omaha?

A. At Omaha.

Q. You have had experience as an operating officer, then, on the lines in Kansas, Nebraska, Colorado and Wyoming?

A. Yes, sir.

Q. And as system officer, in charge of safety, on all of the railroad?

[fol. 1208] A. That is correct.

Q. Have you been furnished with a copy of the exhibit marked No. 77?

A. Yes, I have.

Q. And the lines on which you have had this experience as a division officer and in other capacities as well as a system officer, are shown on Exhibit 77?

A. Yes, sir. That is correct.

Q. The Kansas Division, over which you are now superintendent, is the portion confined to all of the lines in Kansas, as indicated there?

A. Yes, extends about two-thirds the way—about half the way from Kansas City to Denver, about two-thirds the way through the State of Kansas.

Q. As a Division officer, and later as a System officer, Mr. Warfel, was it ever your duty or privilege to ride upon freight trains as well as passenger trains?

A. Yes, I have ridden many of them.

Q. Do you, in the course of your duties as superintendent now ride upon freight trains in your division?

A. Quite frequently.

Q. Have you ridden on freight trains on other portions [fol. 1209] of the system?

A. Other than that on which I am now employed?

Q. Yes.

A. Yes.

Q. Have you ridden on freight trains in the territory west of Cheyenne as well as east?

A. Yes.

Q. What part of the freight train do you generally ride?

A. Almost always the caboose.

Q. Is that part of the duties of an assistant superintendent, trainmaster, or roadmaster, to ride in a caboose?

A. Yes, sir.

Q. As well as the superintendent, when occasion offers?

A. That is right.

Q. Was it part of your duty as assistant to the operating vice-president to ride on freight trains?

A. It was.

Q. Did you then ride the caboose as well?

A. I did.

Q. Do you make any particular selection of freight trains according to their length on which you are going to ride?

[fol. 1210] A. No, sir.

Q. Have you ever ridden on freight trains of more than seventy cars?

A. Oh, yes, quite often.

Q. As often as upon trains of shorter length?

A. I think, about even.

Q. What is the longest freight train on the Union Pacific on which you ever rode, as you recall?

A. I believe 132 cars.

Q. In what territory was that?

A. The territory between Grand Island and North Platte.

Q. Are trains of that length frequently operated between Grand Island and North Platte?

A. Rather frequently. We don't very often operate trains much longer than that.

Q. Does the Union Pacific have a code of rules governing its operations?

A. It does.

Q. Is that a regular printed and bound book supplied to the employees of the operating department?

A. Yes, sir.

Q. Have you ever seen or heard of the Standard Code of Rules of the American Railroads Association?

A. I have.

[fol. 1211] Q. Are you familiar with it?

A. Fairly so.

Q. Will you say whether or not the Union Pacific rule book bears any relation to the A. R. A. Standard Code?

A. It conforms to it quite closely.

Q. Are you familiar, in general, with the operating conditions encountered on the various parts of the Union Pacific System, including those west of Ogden and Granger, as well as east of those points?

A. I think fairly so.

Q. You have made frequent trips over those parts of the system, have you?

A. Yes, sir.

Q. I mean, particularly the main lines?

A. Yes, sir.

Q. Do you know whether or not the Union Pacific has block signals upon its main lines?

A. Throughout its main lines.

Q. You were for a long time a member of the Signal Department, were you not?

A. For a number of years, yes, sir.

Q. You are familiar with the block system of signals?

A. Reasonably so.

[fol. 1212] Q. You are able to recognize their operation and characteristics?

A. I am.

Q. Do you know what the standard weight of rail in the Union Pacific main lines is at the present time?

A. All rail laid in the past three years is 131 pounds to the yard. We have in the main track, however, a very large amount of 110-pound rail.

Q. Is the 131-pound replacing the 110-pound?

A. It is, yes, sir.

Q. Now, does the 110-pound prevail in the districts west of Granger and Ogden, to any extent?

A. Yes, I think it does.

Q. And on your particular division, the Kansas Division, what is the extent of the heavy rail?

A. We have 100-pound and 110-pound rail for the first seventy-five miles of the main track to Menoken, about five miles west of Topeka. Beyond that our rail is mostly 90 pounds to the yard. From that point to Ellis, Kansas.

Q. The district between Kansas City and Topeka, is that a single or double track?

[fol. 1213] A. Double track.

Q. Used jointly with another railroad?

A. The Chicago, Rock Island and Pacific.

Q. What is the character of the district between Council Bluffs and Ogden; is that single or double tracked?

A. That is double tracked throughout.

Q. Does that cross any mountain ranges?

A. Yes, that crosses the East range of the Rockies and crosses the Continental Divide west of Rawlins, and the Wasatch Range just before reaching Ogden.

Q. Do you remember what elevations that railroad attains between Cheyenne and Ogden?

A. Our highest point in the eastern range of the Rockies is a little over 8000 feet. I believe the figure is 8,012 feet; our next highest elevation is, I believe, 6,800 feet.

Q. Those are both in Wyoming, are they not?

A. Yes, sir.

Q. Your elevation on the Kansas Division does not exceed 4000 feet, does it, at any point?

A. No, not at any point.

Q. Now, referring to the line between Ogden and Salt Lake City and Los Angeles, does that cross any mountain ranges that you know of?

[fol. 1214] A. That railroad is rather mountainous, that is, it runs in the mountains, but as to crossing ranges, with the exception of the crossing of the range at Cañon Pass, which we cross on the tracks of the Santa Fe coming into San Bernardino, California, I don't know that it crosses other ranges of mountains.

Q. Now, between Barstow,—your railroad runs through Barstow, does it not?

A. It does.

Q. Between Barstow and Salt Lake City, what is the general character of the country traversed?

A. That is a rather hilly country, a desert country, but very little of it is level. That railroad is rather crooked, a great many curves.

Q. The country is predominantly desert country, however, isn't it?

A. It is.

Q. Does your line between Granger and Portland cross any districts of desert and mountain?

A. It is a good deal of so-called desert country, the lava district. We, however, run through the Snake River Valley, which are irrigated bottom lands, we cross the Blue [fol. 1215] Mountains between LeGrande and Pendleton.

Q. In Oregon?

A. In Oregon, and then follow the Columbia River down to Portland along the bluffs.

Q. Have you become familiar with the ruling grades upon any portions of the Union Pacific System?

A. To some extent, yes. I know where they are located.

Q. I take it that would relate particularly to the grades in the district between Ogden and Council Bluffs?

A. Yes, I am fairly familiar with that.

Q. By the way, what is the nature of the territory in Wyoming, is that fertile valley, or mountainous or desert?

A. No, that is practically a desert country throughout.

Q. Between Cheyenne and Omaha, what is the character of territory there?

A. We leave the mountains coming east from Cheyenne, coming east to Omaha, and after the first forty miles east of

Cheyenne, which is rather a desert country, some grazing, we come out into the beginnings of cultivated areas, and from there on eastward as we approach Omaha we come [fol. 1216] into better richer farm country. Eastern Nebraska is rather a rich farm country.

Q. From North Platte to Omaha you follow the Platte River?

A. Yes, from Julesburg, Colorado, to Omaha, we follow the Platte River.

Q. Does the Union Pacific connect with the Southern Pacific lines?

A. At Ogden, Utah.

Q. Also at Wells, Nevada?

A. At Wells, Nevada.

Q. Portland, Oregon?

A. It does.

Q. And Los Angeles, California?

A. It does.

Q. And at various other points in southern California?

A. It does.

[fol. 1217] Q. Have you been furnished with copies of defendant's exhibits 2, 3, 5, and 6, Mr. Warfel? No. 2 I think is the exhibit relating to the design of boxcars.

A. Yes, I have.

Q. Does the Union Pacific own and operate freight boxcars which conform in any respect to those indicated by exhibit No. 2?

A. Yes, we do. As a matter of fact the standards of the Union Pacific and the Southern Pacific have been quite similar. At one time they were operated under the same general management.

Q. You mean the standards of boxcar design or general standards of railroad construction and operation?

A. I mean both, the standards of cars and the maintenance of way standards are quite similar.

Q. They use many of the same forms and methods of accounting to this day, do they not?

A. That is correct.

Q. As to those standards of boxcar construction, do the Union Pacific standards and actual construction of boxcars conform to those shown on the exhibit?

A. They do.

Q. Does the Union-Pacific now operate any steel or steel [fol. 1218] underframe cars?

A. All the freight cars operated by the Union Pacific are steel or steel underframe cars with the exception of 174 logging cars used out on the logging branches in the state of Washington. There are 174 wooden frame cars used for bringing logs down to the central line that are still in service. They are simply trucks with a center sill.

Q. Do those logging cars ever move off the Union Pacific lines?

A. They do not, they don't get into main line service on the Union-Pacific.

Q. You say you have only 174 wooden underframe cars of any description?

A. That is all owned.

Q. You have no wooden underframe boxcars?

A. No.

Q. Are you familiar with the Pacific Fruit Express Company's cars?

A. Yes, sir.

Q. Does the Union Pacific handle any of those cars?

A. A great many. The Union-Pacific is a direct connection with the Southern Pacific and the P. F. E. cars, as we call them, are in very general use for perishables.

[fol. 1219] Q. Do you know of your own knowledge whether the Union Pacific bears any direct relation to the Pacific Fruit Express Company?

A. I don't know how strict that term "my own knowledge" applies. It is common knowledge on the Union Pacific that the Union Pacific is a part owner of the Pacific Fruit Express.

Q. A half owner, is it?

A. I believe so.

Q. Do you know who owns the other half?

A. It is common report that the Southern Pacific owns the other half.

Q. You don't know that of your own knowledge?

A. I haven't seen the stock certificates, no, sir.

Mr. Strauss: Of course the court understands my objection is a running objection to all this testimony.

The Court: If you are objecting to these last questions—

Mr. Strouss: My understanding was that my objection was a running objection. I haven't voiced it again.

The Court: You mean this is not the best evidence?

Mr. Strouss: It is a conclusion and not the best evidence [fol. 1220] and is hearsay.

The Court: I will sustain the objection to these last two questions and answers and they may be stricken.

Mr. Mason: You mean as to the common knowledge?

The Court: Yes, sir. The court will appreciate, Mr. Strouss, even though you have the running objection which I think the court pretty well understands, in an instance such as this if you would voice an objection because it is apparently objectionable. I was just waiting for your objection.

Mr. Strouss: I haven't wanted to interrupt the examination of the witness but it was my understanding that the objection was a running one.

Mr. Mason:

Q. Do you know, Mr. Warfel, from what source the Union Pacific obtains its supply of refrigerator cars?

A. All refrigerator cars operated by the Union Pacific or placed on lines of the Union Pacific, practically all of them are Pacific Fruit Express cars.

Q. Do you know whether the Pacific Fruit Express maintains icing facilities at points on the Union Pacific?

A. They do, they operate icing facilities at all the major icing points.

[fol. 1221] Q. Do you know whether the Pacific Fruit Express maintains any repair facilities at points on the Union Pacific?

A. They do.

Q. At which Pacific Fruit Express Company cars are repaired?

A. That is right.

Q. Can you name one or more of those points?

A. One of those points is near Nampa, Idaho. I don't at the moment recall the name of that station where that repair yard is located. I don't believe that it is Nampa.

Q. You have seen the plant, have you?

A. I have seen the plant, I have been in it.

Q. Are there any repair facilities maintained at North Platte, Nebraska?

A. Not specifically for P. F. E. cars.

Q. Or Laramie, Wyoming?

A. Not for P. F. E. cars.

Q. You have seen many P. F. E. cars of course?

A. I have.

Q. Are you familiar with the medallions, sometimes employed by railroad companies as indications of their identity?

A. I assume you refer to the Union Pacific shield which appears on the sides of a great many P. F. E. cars. I am [fol. 1222] familiar with that.

Q. The Union Pacific has a shield or medallion with—

A. A distinctive emblem of the railroad.

Q. That appears on P. F. E. cars, does it?

A. It does.

Mr. Strouss: I don't see the materiality of all of this.

Mr. Mason: I am determining from the witness's own knowledge the close relationship between the P. F. E. and the Union Pacific.

Mr. Strouss: Supposing there is, why is that material?

Mr. Mason: I am going to connect it with the Southern Pacific and the materiality will be obvious.

The Court: I will overrule the objection on the avowal of the counsel that he will connect it up.

Mr. Mason:

Q. Do you know whether the Pacific Fruit Express Company maintains repair facilities at points on the Southern Pacific which you have observed?

A. I have been in the repair yard of the Pacific Fruit Express cars which I understood was a part of the Southern Pacific lines at Los Angeles.

[fol. 1223] Mr. Strouss: I move that be stricken.

The Court: It may be stricken.

Mr. Mason:

Q. Have you observed any other medallion or emblem on P. F. E. cars other than the Union Pacific emblem?

A. Yes, the Southern Pacific insignia or emblem appears on a great many P. F. E. cars.

Q. On the same cars which bear the Union Pacific emblem?

A. No.

Q. Will you refer to exhibit No. 4, please, and without undertaking to go into detail will you state whether or not the Union Pacific has developed and constructed its passenger cars along lines similar to those indicated by the exhibit?

A. It has.

Q. Do you now have in service in the Union Pacific any passenger train cars of wooden construction?

A. None.

Q. Does that last answer apply to so-called "head-end cars" as well as the passenger-carrying cars?

A. Yes. There are no wooden passenger cars in revenue service anywhere on the Union Pacific lines. There are a few wooden passenger cars in camp service as camp [fol. 1224] outfit cars. Those are discarded wooden passenger cars that are in camp service as kitchen cars.

Q. Do you have any articulated units or units of similar design as shown for the years 1937 to 1939?

A. Yes, the Union Pacific has articulated cars similar to those.

Q. Do any of those operate in through service with the Southern Pacific?

A. They do.

Q. Through what gateway?

A. Through Ogden.

Q. Do you operate passenger trains in through service jointly with the Southern Pacific?

A. Yes, sir.

Q. Through the Ogden gateway?

A. Through the Ogden gateway.

Q. Do you have any through cars in service through any other gateways such as Portland?

A. Not in through service with the Southern Pacific so far as I recall.

Q. These trains that are operated in through service with the Southern Pacific through the Ogden gateway, do those operate in through service with any other railroad beyond your lines?

[fol. 1225] A. Yes, with the Chicago and Northwestern at the eastern terminus of the Union Pacific through Omaha.

The Court: I see the noon hour has arrived. Before taking our recess, so there will be no misunderstanding, the record may show that all testimony of this witness with reference to the ownership of P. F. E. cars may be stricken.

Mr. Mason: The cars or the company? I think the question was addressed to the ownership of the company and I think that is where the objection was made.

Mr. Strouss: It went further than that, it went to the cars also.

The Court: I think it will cover both. The court will be at recess until 2 P. M.

(Thereupon, at 12 o'clock noon the court stood at recess until 2 P. M. this day, December 10, 1940.)

[fol. 1226]

December 10, 1940, 2:00 P. M.

Proceedings were resumed at this time as follows:

The Court: You may proceed with your examination of the witness.

The witness, GEORGE H. WARFEL, was recalled to the stand and testified farther as follows:

Mr. Mason: Mr. Warfel, does the Union Pacific operate pullman cars on your through passenger trains you referred to before the adjournment?

A. Yes; they do.

Q. And in any of its other trains?

A. The Union Pacific operates sleeping cars in some trains that do not go through to other connecting lines.

Q. It operates those through pullmans in connection with the Southern Pacific?

A. Yes, it does.

Q. Are they of peculiar type or —

A. The regular standard sleeping cars, with the exception, I might say, of the streamliner, where they are specially constructed.

Q. You refer to streamliner trains. Are there some streamliner trains operated by the Union Pacific in connection with other railroads?

A. Yes, the Chicago and Northwestern, Union Pacific [fol. 1227] and Southern Pacific operate through streamliner trains between Chicago and San Francisco.

Q. You have through streamliner trains as well to the Pacific coast?

A. Yes, there are streamliner trains operated from Chicago to Los Angeles, and from Chicago to Portland.

Q. Have you before you a copy of Defendant's Exhibit No. 5, Chronology of Freight Locomotives?

A. Yes, I have.

Q. Will you say whether the development of freight locomotives on the Union Pacific has proceeded along the lines indicated by that exhibit?

A. Very similar.

Q. Do you have on your line types which are the same as or similar to those shown?

A. Yes, we do, all except the articulated consolidations, we don't have engines of that particular type.

Q. You have Mikados, Consolidation 2-10-2 type, do you?

A. Yes, we do.

Q. Do you have a large type locomotive corresponding in tractive effort to the articulated consolidation?

[fol. 1228] A. Yes, we have Mallets of the 3-8-8-0 type. They have a tractive effort of 102,666.

Q. Do you have any other large locomotive corresponding to this 124,000-pound tractive effort size that the Southern Pacific has?

A. No, the Mallets have the highest tractive effort of any engines we use.

Q. Apart from those Mallets, what is the largest locomotive you have in regular freight service?

A. We have an engine known as Union Pacific type, a 4-12-2 engine, that is a three-cylinder locomotive with a tractive effort of 96,650.

Q. That is slightly larger than the Southern Pacific type, but a somewhat similar wheel arrangement?

A. Yes.

Q. Now, will you refer to the passenger class locomotive, Defendant's Exhibit No. 6? Do you have locomotives on the Union Pacific corresponding to those shown there?

A. Very similar to all of those shown. You have ten-wheelers shown in two items here; we have a few ten-wheelers.

Q. Do you use the mountain-type locomotive in passenger service to any extent?

[fol. 1229] A. Yes, we do.

Q. Are they larger or smaller with respect to tractive effort than those shown here?

A. We don't get quite the tractive effort shown in your exhibit, 54,838, and we have no boosters on our engines.

Q. You have a 4-8-4 locomotive in service on the Union Pacific, have you?

A. Yes, that is a Northern type of locomotive.

Q. Which corresponds to what is known here as the Golden State?

A. Very closely.

Q. How does that compare?

A. It is 63,629 pounds, slightly more than that shown in your smaller 4-8-4's here.

Q. Do you have any other types which are different than those shown on this exhibit which are used in passenger service?

A. We use a Mallet, which we call the Challenger type locomotive, a 4-6-6-4, which has a tractive effort of 97,400. We use those in heavy-grade territory on passenger equipment.

Q. Are those 4-8-4's and the Challenger type locomotive comparatively recent acquisitions?

A. Yes, they are. The last of the 4-8-4's were received in [fol. 1230] 1938, in October, and the last of the Challenger-type Mallets also in 1938.

Q. Are your locomotives equipped with super-heaters?

A. Yes.

Q. With feed water heaters?

A. Yes.

Q. Do you know what type of brake equipment they use?

A. No, I don't believe I can state the exact type.

Q. What sort of air-compressors are applied to them? Do they have single compressors?

A. No, they have double compressors on all the latest engines.

Q. Do they have more than one air reservoir?

A. Yes, they do.

Q. Do they burn coal or oil, or do you use both types of fuel?

A. All of our engines in use between Omaha and Ogden are coal-burning engines. We have some oil-burning engines in the northwestern territory up in the forest country in Oregon and Washington, but the large majority of our engines are coal-burning.

Q. Do you use oil-burning engines on the line from Salt [fol. 1231] Lake City to Los Angeles?

A. Yes, we have oil-burners on that.

Q. These large types, mountain-type, 4-8-4's, the Mallet type, and the Challenger type, when they are coal-burners, are they hand-fired or stoker-fired?

A. Stoker-fired.

Q. Do you know whether any of them are equipped with pressure lubrication?

A. Yes, the more modern engines are equipped with pressure lubrication, force feed lubricated.

Q. In freight service, and particularly through freight service, what are the lengths of the locomotive runs?

A. Well, they vary under the different traffic conditions. We have runs of the 4-8-4's from Omaha to Cheyenne; that is 507 miles; that is regular practice.

Q. That is a regular run?

A. Yes, sir. Several of our runs run through with those engines.

Q. How far from Kansas City do you run with the same passenger engines?

A. To Denver, 640 miles.

Q. Do they change out the passenger locomotive at Cheyenne?

[fol. 1232] A. Yes, engines are changed at Cheyenne.

Q. How far do they run from Cheyenne?

A. We run to Salt Lake from Cheyenne. That is 519 miles. We run to Pocatello, that is 551 miles. We also run Denver to Salt Lake, 625 miles, without changing engines.

Q. Your run from Denver to Salt Lake City would be through Colorado, Wyoming and Utah?

A. Yes.

Q. And from Cheyenne to Pocatello would be across Wyoming and part of Idaho?

A. Yes.

Q. Do you know what the length of the freight run in through-freight trains is?

A. Our longest runs, about 335 miles, Las Vegas to Los Angeles, and Pocatello to Huntington, 336 miles. Those are about as long runs as we have. We run Omaha to North Platte, change engines at North Platte, that is 281 miles.

Q. That is, the freight trains.

A. Yes.

The Court: Mr. Warfel, diverting a moment to the passenger runs, if I understood your testimony correctly, on certain of your runs the same locomotive is used for a distance of approximately 600 miles without change?

[fol. 1233] A. That is right.

Q. How many times during that distance, how often is the crew changed?

A. Engine crews customarily change with the freight subdivision, that is where they hold their seniority rights. Engine crews on the run from Omaha to Cheyenne would change, use four different crews on that locomotive.

Q. The total distance is what?

A. 507 miles.

Q. With four changes of crews?

A. Four changes of crews.

[fol. 1234] Mr. Mason: On the run from Denver to Salt Lake City where would the engine crew changes take place?

A. At Larainie, Rawlins, Green River, and Evanston.

Q. You would have five different crews, four changes?

A. To Salt Lake City you would also change at Ogden, there would be five crews in that one.

Q. On your freight run from Omaha to North Platte how many changes would there be and where would they take place?

A. The first subdivision from Omaha to Grand Island we would change crews and the next subdivision from Grand Island to North Platte.

Q. Do you run through from North Platte to Cheyenne with freight engines?

A. Yes.

Q. Where do you change the crew?

A. At Sidney, Nebraska. That is the end of the third subdivision and the beginning of the fourth subdivision.

Q. Do you interchange freight with the Southern Pacific at the Ogden gateway?

A. Yes, we do.

Q. Does that include perishable freight?

[fol. 1235] A. Yes, we get a great deal of perishable freight from the Southern Pacific at Ogden.

Q. Do you interchange westbound freight as well as perishable?

A. Yes, very extensively.

Q. Will you say whether or not Ogden is one of your principal gateways on east and westbound traffic to the Pacific Coast?

A. It is.

Q. Do you know whether the Union Pacific maintains through schedules jointly with the Southern Pacific through the Ogden gateway relating to the east and westbound traffic?

A. They do.

Q. You heard the testimony of the witness Fertig of the Rock Island as to schedules in which his line participates, did you?

A. Yes, I did.

Q. Does the Union Pacific participate in similar schedules for California originated traffic?

A. Very similar.

Q. Do you know what point on the Southern Pacific in California the schedules for eastbound perishables are based?

A. Roseville is the assembly point.

Q. You heard Mr. Fertig's testimony as to run-off time [fol. 1236] on these eastbound perishable schedules?

A. Yes.

Q. Does the Union Pacific participate in the run-off of the later trains moving on these schedules?

A. We do.

Q. At what point does the Union Pacific deliver traffic destined to Chicago and received at the Ogden gateway?

A. At Council Bluffs.

Q. Is that your principal eastern gateway for such traffic?

A. That is the principal gateway for Chicago, yes. A material amount of our perishable also passes through the Kansas City gateway.

Q. To what territory is perishable passing through the Kansas City gateway generally destined?

A. We get a portion of the Chicago business sent through the Kansas City gateway, routed that way and a considerable amount for southeastern and middle-southwestern territory comes to Kansas City.

Q. Does that routing through Kansas City of Chicago traffic have anything to do with diversion enroute?

A. It does. There is a great deal of diversion of perishable traffic. We get diversions at the major

terminals on a considerable proportion of the through perishable traffic.

Q. Will you explain in order that the court and the parties may understand more fully just what is meant by these diversions of perishable traffic?

A. A diversion is a telegraphic order from the shipper or the party having possession of the bill of lading to divert the car to a different route or a different point from which it was originally way billed. A considerable amount of perishable freight is sold while enroute and they wire the new destination. They may start the car billed to Chicago and divert it to Memphis, Tennessee, or Indianapolis, or to any other point and wire us the diversion which we accomplish. They have a record of the progress of the cars over the railroad and those diversions are placed at the next terminal the car will reach and accomplish that.

The Court:

Q. Is that a rather common practice with perishable products?

A. It is quite a general practice.

Mr. Mason:

Q. Is that part of the normal and ordinary handling of perishable by the Union Pacific to receive and perform these diversions?

A. It is.

[[fol. 1238] Q. You heard the testimony of witnesses Randall and Triem as to the furnishing of passing reports to shippers of perishables and to consignees?

A. Yes.

Q. Does the Union Pacific have a similar service?

A. It does, practically the same as they referred to.

Q. Do you know why these passing reports are furnished to shippers or receivers of this perishable freight?

A. That is to enable them to know the location of their cars at any time and to be able to distribute them to the best advantage.

Q. By "distribution" you mean to accomplish or direct these diversions?

A. To accomplish diversions on the cars.

Q. Can you say what effect the use of the diversion privilege has upon the marketing of perishables?

A. It permits marketing to better advantage. The crop can be moved and can be sold while moving or distributed I should say moving according to the demands of the territories and the advantages of the different terminal markets. The result of that is, of course, the obtaining of the [fol. 1239] best price available at the final market.

Q. Does the Union Pacific in its participation in these schedules also participate in the guarantee feature of which Mr. Fertig spoke?

A. Yes, it does.

Q. I ask you to recall Mr. Fertig's testimony as to the over-all times from California origin points to Chicago. Does the Union Pacific have allotted to it a particular portion of that over-all time?

A. Yes, they have an agreed upon portion which they undertake to—a portion of that schedule which they undertake to make, depending upon the time they get their deliveries from the connection, they put the cars over the Union Pacific at a given amount of time.

Q. Does that obligate you to make the turnover to your connection at Council Bluffs or Kansas City within a specified over-all time?

A. Yes, it does.

Q. From your experience and knowledge, are you able to say whether the Union Pacific performs according to the schedule obligations?

A. We very rarely are late in our deliveries, almost invariably put the business over our portion of the through route in its allotted time.

[fol. 1240] Q. Can you give us any approximate percentage of performance as compared with failure?

A. I don't think that I can state it in terms of percentage. I recall we delivered for two years straight continuously to Council Bluffs without a failure but that was not within the last two or three years. I am not sure what the percentage of performance is now.

Q. You are stationed at Kansas City and are somewhat familiar with the situation at Kansas City?

A. Yes.

Q. What is the situation there?

A. We very rarely fail to make our connection at Kansas City.

Q. Are you familiar to any extent with the westbound schedules?

A. Yes, we have westbound schedules on high-class merchandise, forwarded cars, business of that type.

Q. Do these schedules obligate you to handle the business within a particular allotted time from Council Bluffs to Ogden, for example?

A. Yes, we handle through schedule business, auto parts and business of that type where the shipper depends upon the steady movement of his business to the factory or his plant and we participate in the westbound schedules with [fol. 1241] the Southern Pacific also,

Q. Do you know what your percentage of performance in proportion to the total number of trains of that kind moved may be?

A. I couldn't state it in terms of percentage. I know, however, that failures to handle the business over the railroad in the allotted time are very, very rare. I should say that the percentage of on-time performance would run better than 95 per cent but I couldn't state it exactly.

Q. Is this handling of perishables eastward according to schedule and of manufactured traffic, merchandise of the kind you have described westward according to schedule, a special and distinct service or part of the regular order of business?

A. It is part of the regular order of business. The perishable business is a very heavy part of the Union Pacific's freight business if I understand your question correctly.

Q. Do you maintain similar schedules to the ones applying to the Ogden gateway or the movement from the north Pacific Coast?

A. Yes, we do, from Reith concentration point at Reith, Oregon, which corresponds in the northwest territory to Roseville in the San Francisco territory, central California, [fol. 1242] and also Colton in the southern California territory.

Q. Do you maintain a schedule from Colton?

A. Schedules from Colton to Chicago, in fact it is identical with the schedules from Roseville.

Q. Is it the same as the schedule from Colton via Southern Pacific to Chicago?

A. I think identical.

Q. I direct your attention to a statement of one sheet entitled "Union Pacific Railroad Company, Typical Examples of Freight Trains Handled between Certain Termi-

nals, August 10-19, Inclusive, 1940." Have you that statement before you?

A. I have.

Mr. Mason: May we have this statement marked for identification?

The Court: It may be marked.

The Clerk: Defendant's exhibit No. 91 for identification.

Mr. Mason:

Q. Did you prepare exhibit No. 91 for identification?

A. Yes, it was prepared under my direction.

Q. From what sources was it prepared?

A. From the train sheets.

Q. Are these districts shown on this exhibit indicated in [fol. 1243] heavy line upon the map, exhibit No. 77?

A. They are.

Q. Who selected the period August 10 to 19th, 1940?

A. I did.

Q. For what reason?

A. It was the most recent month of normal business at the time I was asked to prepare this exhibit and I chose it because it is about halfway between our lowest volume of business in the early summer and our maximum volume of business which usually comes in the latter part of October.

Q. Who selected the districts or subdivisions?

A. I chose them.

Q. Does the exhibit include local trains or only through trains?

A. It includes only through traffic, it does not include local freights, turn-around freights, or local switchers, or any of the branch runs, it only includes the through line. This is our trunk line, that is the reason I took this territory, from North Platte to Omaha is our main trunk railroad. That is east of the Rocky Mountains where the Denver traffic—that is, the traffic from Denver, the Colorado traffic as well as that from the west coast all runs [fol. 1244] over this line into Council Bluffs and Omaha.

Q. The district between Hastings and North Platte, is that part of the main through line?

A. Yes, Hastings is about 20 miles south of Grand Island, and the run from North Platte to Hastings splits

off at Gibbon, a point about 21 miles from Hastings. That is the traffic that goes via Kansas City gateway. In other words, crews run from North Platte east to Grand Island or to Hastings because at the eastern end of their subdivision there is that split of 20 miles where the Kansas City traffic splits off from traffic running via Omaha and Council Bluffs.

Q. These trains between North Platte and Grand Island and between North Platte and Hastings would run for 106 miles approximately over the same stretch of track?

A. That is correct.

Q. Before they reach the junction at Gibbon?

A. That is right.

Q. Are these types of locomotives the types you have referred to in your discussion of exhibit No. 5?

A. Yes, they are.

Q. What is the wheel arrangement of the Santa Fe type? [fol. 1245] A. That is a 2-10-2.

Q. And the Northern?

A. The Northern type engine is a 4-8-4, that is the large passenger power.

Q. And in this instance was used on a freight train?

A. Yes, there is a run made during this ten-day period on each of the subdivisions, breaking in a 4-8-4, an engine that was in the shop and broke in on freight service before put into passenger service.

Q. Is the information on ruling grade shown on the dispatchers' train sheets?

A. No, it is not.

Q. From what source was that taken?

A. The ruling grade is taken from the profiles of the railroad.

Q. Have you the train sheets and profiles available in the courtroom for the use of opposing counsel?

A. Yes, I have.

Q. Has the exhibit been compared against the original source?

A. It has, yes, sir.

Q. Have you determined whether or not it is true and correct?

[fol. 1246] A. It is to the best of my knowledge and belief.

Mr. Mason: Have you any questions, Mr. Strouss?

Mr. Strouss: The train sheets which you have here are train sheets covering this ten-day period only?

A. That is correct.

Mr. Strouss: That is all.

Mr. Mason: I take it that all of the trains, including locals, turn-arounds, etc., are shown on the train sheets although not reproduced here?

A. Every train in movement is shown on the train sheets.

Mr. Strouss: For the ten-day period?

A. On each train sheet for the twenty-four hours that it covered.

Mr. Strouss: And the train sheets cover the ten-day period?

A. They do; there are two dispatchers' districts in this territory and the sheets from both districts are here.

Mr. Mason: We offer the exhibit in evidence as No. 91.

Mr. Strouss: The same objection.

[fol. 1247] The Court: Objection overruled, it may be admitted.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 91.")

Mr. Mason: While exhibit No. 91 refers to the district between North Platte and Council Bluffs, will you say whether or not the operation of trains of similar length and consist is practiced on other parts of the railroad?

A. It is, very similar.

Q. For example, do you on the Kansas division have train operations somewhat similar to that shown on this exhibit?

A. Yes, we do; the trains that run to Hastings, Nebraska, come on my division and pass over my division intact.

Q. Do the operations between North Platte and Cheyenne include operations similar in any respect to that shown here?

A. Yes, they do, almost the same.

Q. What as to the district between Cheyenne and Green River?

Mr. Strouss: If the court please, are we going to have a record of those districts brought in? If he is going to

testify what their operations are there, I think we should have the record brought up.

[fol. 1248] Mr. Mason: I am asking this based on the witness's own knowledge and he is subject to cross-examination. We are not attempting to show it as a matter of record but merely to exhibit this as typical.

The Court: Will you read the last question?

(The last question was read by the reporter.)

Mr. Mason: It will be recalled that I qualified the witness as having been assistant superintendent at North Platte and formerly superintendent at Cheyenne with knowledge gained of course in those capacities as to operations in those territories, which by the way are adjacent, as the map will show, to the territory shown here.

The Court: Objection overruled, you may answer.

A. The operation between Cheyenne and Laramie is not similar to the operation here. We go over what is known as Sherman Hill, that is our highest grade, steepest grade, and trains of the length shown here are not often run, in fact, we don't run trains as long as the longest train shown here over Sherman Hill, but trains are consolidated again, particularly empty trains in the westward movement at Laramie and trains of similar length to this shown here are run westward from Laramie.

[fol. 1249] Q. Do you run heavier power between Cheyenne and Laramie over Sherman Hill?

A. Yes, that is where the Mallets are utilized.

Q. What is the ruling grade over that?

A. 1.55.

Q. Do you use helper service there?

A. At times, yes.

[fol. 1250] Q. Is there any rule as to the maximum length of trains to be operated, maximum length of freight trains to be operated on the Union Pacific?

A. There is not.

Q. You said that you did not operate trains as long as the longest shown on this exhibit over Sherman Hill. What length trains do you operate over Sherman Hill eastward or westward?

A. Eighty-five to one hundred, or one hundred five cars normally.

Q. In either direction?

A. Yes, in either direction.

Q. I want to ask you, are these matters within your own knowledge and observation as superintendent and division officer?

A. They are.

Q. Do you have branch lines on the Nebraska and Kansas Division?

A. Oh, yes.

Q. Branch-line operated freight trains?

A. Oh, yes.

Q. How long do the trains run on the branch lines?

A. Branch-line runs are usually limited to a hundred miles. The only branch that I recall offhand on my own [fol. 1251] division, of all the branches with which I am familiar, one of the longest is on my own division, I should place it that way, and we have a terminal in the middle of that branch line; that run is 110 miles.

Q. How many cars are handled in those freight trains in the branch lines, normally?

A. I should say, all that are offered. They seldom run over forty cars, and frequently on branch lines, only five, six, or ten cars.

Q. Will you state the reason why no more are handled?

A. That is all the business there is for us to do. Our business has been very seriously affected, of course, as everybody knows, by highway competition; branch lines are very poor lines now.

Q. Have you before you, Mr. Warfel, in one sheet bearing the title, "Union Pacific Railroad Company, Maximum Number of Cars Handled, November, 1939, January, April, and July, 1940, on Through Main Line Passenger Trains"?

A. Yes, I have.

Mr. Mason: May we have the statement marked "Defendant's Exhibit No. 92 for Identification"?

The Court: It may be marked.

[fol. 1252] The Clerk: Defendant's Exhibit No. 92 for identification.

Mr. Mason: Did you prepare Defendant's Exhibit No. 92 for Identification?

A. It was prepared under my direction.

Q. From what sources was this prepared?

A. From the conductor's wheel reports.

Q. Have you the conductor's wheel reports covering the period and the trains shown on this exhibit?

A. Yes, sir.

Q. Are they in the court room?

A. Yes, they are.

Q. Are they available for examination of opposing counsel?

A. They are.

Q. Who selected the period?

A. I did.

Q. For what reason?

A. I was impressed by a similar report that I had recently seen on performance of our trains, and I thought that would be a very typical arrangement for a report of this kind, so I had the report made up in the same way covering a series of months, every three months. I should say, the reason this report started with November is that [fol. 1253] since our latest 800's were received in October, I started the report with the next month. We have been able to get the best use of our passenger power since we got the latest of the 800's.

Q. By the 800's, you mean a new type of locomotive?

A. Yes, Northern 4-8-4's.

Q. The latest passenger power you have purchased?

A. Yes.

Q. Will you say whether the showing for the four months, November, January, April and July, shown on this exhibit, represent a fair cross-section of the twelve months' business?

A. It does.

Q. Has the information shown on the exhibit been checked against the wheel reports?

A. It has been.

Q. Will you say whether or not the exhibit is true and correct?

A. It is true and correct, to the best of my knowledge and belief.

Q. Now, do I understand that the showing here is of the largest, that is, shows the largest number of cars which [fol. 1254] may have been in the train at any one time during its operation over the Union Pacific railroad?

A. It does. The exhibit actually shows the number of cars in these trains. It doesn't show the largest number, because the final column is "17 and Over," but it shows

the number of times that those trains run in the four months under study with trains of the different lengths shown here up to 17.

Q. Let us take an example, the City of San Francisco, in line 6, is shown as having run 15 times with eleven cars, and five times with thirteen cars. Does that mean on those five occasions at some point or another there was thirteen cars in the train?

A. Yes.

Q. And on fifteen occasions it had eleven cars?

A. Yes, sir.

Q. Exclusive of the motive-power units?

A. That is right.

Mr. Mason: Have you any questions, Mr. Strouss?

Mr. Strouss: It doesn't mean on these, necessarily, that a train had that number of cars at all times during the trip?

A. No, those trains, these districts shown are the dis-
[fol. 1255] tricts over which a train passes with the number of cars shown in these columns. The trains running between Omaha and Ogden, for instance, in that upper left-hand bracket, those trains shown ran that many times with that many cars. For instance, in the Overland Limited, in the third line, it shows that that train ran four times with fourteen cars in those four months. Sixteen times it had fifteen cars, thirty times it had sixteen cars, and seventy-one times it had seventeen or over.

Q. That is, some time during the trip it had those?

A. That is right. As I meant to explain, that is the maximum number of cars in the train, but it ran with that maximum number of cars over practically the entire territory.

Q. Are these trains all just straight passenger trains, or do they carry milk, for example?

A. No, these trains are mail, express and passenger; some of them exclusively passenger trains, but most of them, I should say, carry mail and express.

Mr. Strouss: Well, I want to know more about the consists.

The Witness: The wheel reports will show the consists.

[fol. 1256] Mr. Mason: We offer the exhibit in evidence as Defendant's Exhibit No. 92.

Mr. Strouss: The same objection.

The Court: The objection is overruled. It may be admitted.

(The document referred to was received in evidence and marked, "Defendant's Exhibit No. 92.")

Mr. Mason: Now, referring first to the block of the exhibit, lines 1 to 18 inclusive, are those trains shown in that block, or any of them, operated jointly with the Southern Pacific?

A. Yes, they are.

Q. Now, the westward trains, shown in lines 1 to 8, will you indicate which ones are operated jointly with the Southern Pacific?

A. The Overland Limited, No. 3, the Forty-Niner, Line 4, the San Francisco Challenger, line 5, the City of San Francisco on line 6.

Q. What about No. 21, the Pacific Limited?

A. Yes, No. 21 is a connection with the Southern Pacific also.

Q. Now, does the—

Mr. Booth: That is line No. 2.

A. Yes.

Mr. Mason: Does the City of Portland change its consist [fol. 1257] at any point between Omaha and Green River?

A. The City of Portland does not change its consist. That is an articulated streamliner train, the consist remains the same.

Q. What about No. 21, does that change its consist and route between Omaha and Ogden?

A. Yes, it changes its consist once at Cheyenne.

Q. Does it pick up or set out?

A. Both. Train 21 there, as it comes from Omaha, cars are taken out of it destined to Los Angeles, and cars are put into it from the Kansas City 21. Kansas City and Denver 21 shown down in the next section as Pacific Limited.

Q. Now, does the Overland Limited change its consist between Omaha and Ogden?

A. It does not.

Q. Does the Forty-Niner?

A. It does not.

Q. Does the San Francisco Challenger?

A. Adds one car at Cheyenne.

Q. Does it ever add a diner ~~at~~ Green River?

A. Yes, it does pick up a diner at Green River.

Q. Does the City of San Francisco change its consist?

[fol. 1258] A. It does not.

Q. Or the City of Los Angeles?

A. No.

Q. Or the Los Angeles Challenger?

A. No, the Los Angeles Challenger doesn't change until it gets to Ogden.

Q. What about the eastward trains in lines 9 to 16, inclusive?

A. The City of Portland goes through without change; No. 14, Pacific Limited, changes at Cheyenne; No. 28, the Overland Limited, goes through as it stands; No. 48, the Forty-Niner, goes through; No. 88, the San Francisco Challenger, loses a car at Cheyenne; No. ~~102~~, the City of San Francisco, doesn't change; No. 104, the City of Los Angeles, doesn't change; No. 818, the Los Angeles Challenger, loses a car at—no, it doesn't change between Ogden and Omaha, that car is taken out at Salt Lake.

Q. You show, in the upper righthand block, the Omaha-Denver route. Are there any changes enroute on any of those trains?

A. No, those trains run intact from Denver to Omaha, or Omaha to Denver.

Q. In the next block below, you show the Ogden-Los Angeles group of trains. Do those trains change their [fol. 1259] consists enroute by pick-ups or set-outs?

A. There are some changes made at Salt Lake on those trains. That is forty miles from Ogden, but beyond Salt Lake those trains run intact, Salt Lake to Los Angeles. That is practically Ogden to Los Angeles, practically no change, but there are some changes made at Salt Lake.

Q. Do they carry any set-out sleepers in the summer season for passengers going to the Utah parks?

A. Yes, set out sleepers at Lund.

Q. On the Green River-Portland run, are there changes enroute in those four trains?

A. Yes, there are changes at Pocatello, and that is the only place of changes on those trains.

Q. And on the Kansas City-Denver route, are there changes enroute there?

A. No, those trains go intact, Kansas City to Denver.

Q. The Pony Express, Denver-Salt Lake Route, does that run through intact?

A. It does. I was in error about this Pony Express; it cuts out a chair car and a sleeper at Laramie to go northwest toward Portland.

Q. That is the westward train No. 37?

[fol. 1260] A. Yes.

Q. Are there any trains shown on Exhibit 92 which are not operated by steam?

A. Yes, there are a number of them.

Q. Can you refer to them by name or number?

A. Beginning with the upper left-hand square, the first line, No. 1, City of Portland, is a Diesel-powered train. No. 6, the City of San Francisco, is a Diesel-powered train.

Q. You mean Line 6?

A. Line 6, No. 101. The next train, 103, City of Los Angeles, is a Diesel-powered train. And the sister trains, eastward in line 9, No. 2, the City of Portland, is Diesel-powered, line 14, No. 102, the City of San Francisco, and the next below, the City of Los Angeles, No. 104, they are all Diesel-powered trains.

Q. Those same trains, or some of them, are shown on other districts, I believe.

A. Yes, they are.

The City of Los Angeles trains are shown in the second square on the right hand side, second from the top.

Q. Is the No. 11 and its companion train, No. 112, are those steam trains, the City of Denver?

[fol. 2161] A. In the upper righthand bracket?

Q. Yes.

A. Yes, they are Diesel-powered streamlined trains.

The Court: We will take our mid-afternoon recess at this time.

(Thereupon, a short recess was taken, after which the witness was recalled to the stand, and proceedings were resumed as follows:)

The Court: You may proceed.

Mr. Mason: Mr. Warfel, refer to Exhibit No. 92. Will you say whether or not that includes, that exhibit includes all of the through passenger trains operated by the Union Pacific over the district shown?

A. It does.

Q. Does that include, substantially, all of the through passenger trains operated by your company?

A. Yes, it does.

Q. The exhibit excludes the line between Portland and Seattle and between Portland and Spokane?

A. Yes.

Q. Otherwise, it is complete, is it?

A. It is complete, the exhibit as headed, in through main [fol. 1262] line passenger trains, and this covers our entire through passenger service, everything except local short-line trains.

Q. Now, I notice that you show the Pacific Limited and the Overland, and some of these other trains with 15, 16, and 17, and over, cars, quite a number of times. I will ask you, first, does the Union Pacific run through any territory where severe weather is encountered in the winter?

A. Yes, the winter temperatures are pretty low in Western Nebraska and across Wyoming.

Q. How low do those temperatures go?

A. Well, I shouldn't say—I wouldn't be able to say how low they do go, but it is not infrequent to have temperatures of twenty degrees below zero in the winter months in the territory from Cheyenne to Evanston down to Ogden. We come down out of the mountains into Ogden.

Q. Are temperatures as severe as that encountered between Cheyenne and Grand Island; Cheyenne and Omaha?

A. Yes, occasionally, more frequently what we regard as cold weather in Western Nebraska is ten and twelve and fifteen below zero.

Q. Now, in your experience as superintendent and assistant superintendent, and a system officer in that territory, [fol. 1263] can you say whether or not you have experienced any difficulty in heating the rear cars of passenger trains when they consist of fifteen cars or more during the winter weather?

A. Very rarely, and scarcely at all, since we have the newer power with the higher boiler pressures, we are able to heat our longest trains very satisfactorily.

Q. Has the Union Pacific any rule, or has it ever had any rule in recent years as to the limitation of passenger trains during severe weather?

A. No, it has not.

Mr. Mason: That is all. I understand, Mr. Strouss, that you desire to defer cross-examining Mr. Warfel, for the time being?

Mr. Strouss: Yes.

Mr. Mason: I suggest that we call Mr. Kraemer for cross examination, if you are ready to do so.

Mr. Strouss: All right. Are we to have the train sheets?

Mr. Mason: Oh, yes.

The Court: Mr. Kraemer will come forward for cross-examination.

[fol. 1264] W. A. KRAEMER, was recalled to the stand, and testified further as follows:

Cross-examination.

By Mr. Strouss:

Q. Mr. Kraemer, you testified that your on-time schedule performance on the perishable schedules in which the Chicago and Northwestern participated, was about 98 per cent; that is correct?

A. That is correct.

Q. Now, do you mean that that is the percentage of performance on the part of the schedules to be performed by the Chicago and Northwestern, or that is the performance over the entire schedule of carriers combined?

A. The part that is to be performed by the Chicago and Northwestern Railroad.

Q. You don't know anything about those that deliver the perishables to you?

A. Well, that is included, the performance of the combined schedules of the connecting lines, as well as the Northwestern Railroad, the arrivals into Chicago, and the deliveries to connecting lines and placement of the perishable freight at Chicago for unloading.

[fol. 1265] Q. In other words, the carriers, your connecting carrier must deliver to you on time for you to make your deliveries in Chicago?

A. That is correct, or very nearly so.

Q. Now, in connection with your exhibit 75, typical examples of freight trains operated on Wisconsin-Galena and Iowa Divisions, this exhibit is only on through trains between the points indicated in Columns B and C?

A. That is correct.

Q. It doesn't include locals or wayfreights, I believe you said?

A. It does not.

Q. In using the terms "locals," and "~~wayfreights~~," they are used as synonymous, meaning the same type of train?

A. Not exactly. Way freights are trains which, in addition to doing station switching, also load and unload l. c. l. freight, whereas switching runs are run for the exclusive purpose of doing station switching.

Q. That would be the locals?

A. That would be the locals.

Q. Now, any train, then, other than a local or wayfreight operated between the points in these columns, is considered [fol. 1266] a through train, and is shown on the exhibit.

A. That is correct.

Q. Now, you show trains operating between Proviso and Clinton, and Proviso and Nelson, I believe.

A. Yes.

Q. Of course, trains that operate between Proviso and Clinton would operate between Proviso and Nelson?

A. Yes, they would operate through Nelson.

Q. Now, is there a duplication here on your exhibit in those trains in showing the trains between Proviso and Clinton?

A. There is not.

Q. In other words, where the trains just operate between Proviso and Nelson, they are not shown operating between Proviso and Clinton?

A. No, they are not.

Q. And that would be true of other points where the terminals in one instance extend beyond the terminals in the other?

A. That is correct.

Q. Your exhibit 76, many of these trains, that are shown there, are not dailies; that is true, isn't it?

A. Yes, none of the trains with the prefix "City" are [fol. 1267] daily trains.

Q. Number 48 and 49, they are operated ten times a month, from June 19th to September 19th, and thereafter, five times a month, isn't that correct?

A. That is correct.

Q. Trains 1 and 2 are operated only five times a month, that is; the City of Portland?

A. Correct.

Q. 103, City of Los Angeles, those trains are operated ten times a month?

A. Yes, sir.

Q. Trains 101 and 102 are operated five times a month?

A. Correct.

Q. Trains 14 and 21, 27 and 28, 87 and 88, 717 and 818, those trains are local in the sense that they make all local stops between Chicago and Omaha; isn't that true?

A. No, they don't make all local stops, they make the most important stops.

Q. Doesn't your timetable show them as making all stops between those points?

A. No.

Q. What are the consist of these last-named trains?

[fol. 1268] A. Trains 27 and 28 are solid sleeping-car trains.

Q. No head-end cars?

A. No head-end cars, and, in addition to the sleeping cars, contain lounge car and diner. When I say "sleeping cars," I refer to standard sleepers and not tourist cars. Trains 717 and 818 occasionally have head-end cars of express; they consist primarily of coaches and tourist sleeping cars. The same is true of trains 87 and 88. Trains 21 and 14 are the principal so-called head-end trains; they carry mail, baggage, and express cars in addition to coaches, tourist sleepers and standard sleepers.

[fol. 1269] Mr. Strouss:

Q. Mr. Kraemer, I believe you checked some references I gave you to break-in-twos, broken knuckles and draw bars on your divisions?

A. Yes, I did.

Q. Will you check me and see if I give those correctly. On the Iowa division, August 8, 1940, train 223, broken knuckle, 108 cars; on August 8, extra 3025 east, broken coupler, 125 cars?

A. That was 118 cars.

Q. On August 5, extra 3002 west, broken knuckle, 86 cars?

A. Correct.

Q. On August 2, extra 3015, broken knuckle, 86 cars?

A. Correct.

Q. On the Galena division, August 9, Train 229, broken knuckle, 125 cars?

A. That may be 124 or 125, the train sheet didn't disclose. They stopped at Morrison to set out a car of merchandise and the train sheet does not disclose whether the knuckle was broken when stopping or when they started, so it might have been 124 or 125 cars. They had 125 into Morrison, and 124 out.

Q. August 1st, train 253, broken knuckle, 77 cars?

A. Yes.

[fol. 1270] Q. On the Wisconsin division, August 3, train 287, broken knuckle, 147 cars?

A. That is correct.

Q. August 4, broken knuckle, train 287, 97 cars?

A. Correct.

Q. August 4, train 484, broken knuckle, 79 cars?

A. That is rather difficult to determine. In reviewing the train sheets I found that it says the train was delayed in Butler yard setting out and picking up cars and repairing a broken knuckle. The train had 79 cars out of Butler and of course there is nothing on the train sheet to indicate whether that knuckle was broken during the course of switching the train, that is, while the switch engine was setting out or picking up the cars or whether it broke as the train pulled into the yard or whether it broke when they first started. The information is silent. All it says is that the train was delayed setting out and picking up cars and making repairs to a broken knuckle.

Q. August 5, train 287, defective locking block, 148 cars?

A. Correct.

Q. August 6, extra 3035 west, 144 cars, broken [fol. 1271] knuckle?

A. That is correct.

Q. August 6, extra 2803, 145 cars, broken knuckle?

A. Correct.

Q. Did you also check to determine the number of trains operated between Clinton and Boone considering the locals as well as the through trains?

A. Yes; we did.

Q. Do you have that summary?

A. Yes, total of 131 trains of less than 70 cars and 115 cars of over 70 cars. Now in those 131 trains of less than 70 cars that included several work trains and several trains

run with just the cabooses, just the engine and caboose, no cars.

Q. Do you have that by days so you can give it to us for a ten-day period?

A. Yes, for August 1st we had 16 and 12.

Mr. Mason: Sixteen of less than 70?

A. Sixteen of 70 cars or less and 12 of over 70; August 2, 19 trains of 70 cars or less and 14 of over 70; August 3, 14 of 70 or less and 14 of over 70; August 4, 12 of 70 or less, 9 of over 70; August 5, 7 of 70 less, 10 of over 70; August 6, 12 of 70 or less, and 9 of over 70; August 7, 12 of 70 or less and 12 of over 70; August 8, 17 of 70 [fol. 1272] or less and 11 of over 70; August 9, 14 of 70 or less and 11 of over 70; August 10, 8 of 70 or less and 13 of over 70.

Mr. Strouss: That is all.

Redirect examination.

By Mr. Mason:

Q. Mr. Kraemer, in a question addressed to you on exhibit No. 76 reference was made to trains not operating daily and I think you said that all trains bearing the words "City of" as part of the name were less frequent than daily. Isn't it a fact that the City of Denver operates daily?

A. That is correct, my mistake. The City of Denver, trains No. 111 and 112 are daily trains.

Q. Mr. Strouss called your attention to various broken knuckles occurring on certain of these divisions. I will ask you whether the dispatchers' train sheets show any personal injuries to members of the train crew in connection with those occurrences?

A. They do not.

Q. Is it customary on the Chicago and Northwestern to show personal injuries on the train sheet if such personal injuries occur where the train is delayed or a break-in-two occurs?

[fol. 1273] A. It is.

Q. Did any delays take place in connection with these broken knuckles to which you referred?

A. Yes, delays were encountered, total delays anywhere from thirty minutes to an hour and a half, not all as a result

of the broken knuckle. They are impossible to determine, how much was chargeable to the broken knuckle, because invariably in most cases the knuckles were broken as a result of the brakes being applied from the caboose due to someone discovering some defect on the train, either a brake breaking down or hot-boxes.

Q. This was due to the use of the conductor's valve in the caboose?

A. Correct.

Q. Which broke the knuckle and stopped the train?

A. Yes.

Q. Does your study of the train sheets show at what point in the train the break-in-two or broken knuckle took place?

A. In several instances it does, generally it does not. The one on the Galena division on August 1st, which was a train of 78 cars, the knuckle broke on the 17th car from the engine as a result of the brakes being applied in emergency [fol. 1274] for some unknown reason.

Q. Does the record show from what point the brakes were applied?

A. It does not.

Q. It does not show whether it was the conductor's valve or the engineer?

A. No, it does not.

Q. How many cases of broken knuckles or other breaks were referred to in the course of your cross-examination. Have you got the total number?

A. Eleven.

Q. Eleven in a ten-day period?

A. Correct.

Q. Is that all of the broken knuckles that were revealed by the train sheets during that ten-day period?

A. That is correct, all that were revealed on the train sheets for that ten-day period for the 727 trains shown on exhibit No. 75 in addition to local trains, switch runs, way freights, and work trains that are not shown on the exhibit.

Q. Were there a substantial number of local trains, way freights, work runs, and other operations during this ten-day period in addition to these 727 trains referred to in line 50 of exhibit No. 75?

[fol. 1275] A. Yes, quite a substantial number. They will average about 25 or 26 trains per day, local switch runs and way freights in the territory covered by exhibit No. 75.

Q. That would mean approximately 260 additional trains not here shown which were on the train sheets for those ten days?

A. That is correct.

Q. You referred to a locking block as having been one of the appliances which broke. What is the locking block?

A. A locking block is a locking device in the coupler of the car that holds the knuckle in a closed position.

Q. Does it have anything to do with the pin?

A. It is a part of the pin, the locking block is the bottom end of the pin.

Q. I take it that some of the delays encountered in some of these occurrences may have been due to the necessity of repairing whatever brake rigging or whatever other apparatus was down which caused the brakes to be applied?

A. That is correct. For example, on August 6 extra 3035 with 144 cars, the brakes were applied from the caboose by the conductor on account of having been flagged by the sectionman and after the train came to a stop they [fol. 1276] found two hot-boxes in the train. Therefore in addition to replacing the broken knuckle they also had to make repairs to the two hot journals and the total delay encountered by the train was an hour and forty minutes.

Q. You spoke of being flagged by the sectionman. From your experience will you state just how that occurs, what the sectionman does?

A. Yes, all our maintenance-of-way employees, such as sectionmen, bridge and building men, signal department men, crossing flagmen, are all required to watch passing trains for hot-boxes or brake riggings down or any other defects that might be noticeable and if they see any such irregularity they signal the conductor or rear brakeman on the caboose, giving him a stop signal, indicating to the train crew there is something wrong with their train that the train crew hasn't been able to observe, and in such cases if the conductor or brakeman is not able to signal the engineer within a reasonable distance he applies the brakes from the caboose and brings the train to a stop and makes an inspection.

The Court: Do I understand in railroad operations either on freight or passenger trains, that the conductor can in an emergency even without signalling the engineer [fol. 1277] stop the train?

A. Correct. In a passenger train he can do it from any car. In a freight train he can really only do it from the caboose.

The Court: That is by the application of the air brakes?

A. Correct.

Mr. Mason: That is all.

Recross-examination.

By Mr. Strouss:

Q. There were only three of these in which the air was applied from the caboose, wasn't that true?

A. I didn't check the number.

Q. I think that train 287 on August 3, extra 3035 west on August 6—

A. (Interrupting) Yes, there were only three so recorded. However, the train sheet records do not indicate in all cases when the air is applied from the caboose. Judging from my knowledge of the situation here, the location where the knuckles were broken and the location of the car in the train that the knuckle was broken, either the brakes were applied in emergency through a broken air hose or from the caboose or from some other defective braking appliance on the train. I notice 287 also on August 4 with 97 cars [1278] had a broken knuckle 17 cars from the way-car.

Mr. Mason: You mean by the "way-car" the caboose?

A. Rather the caboose. That would appear that the brakes on that train had been applied from the rear end of the train. However, it is impossible to state definitely whether it was. That information is not always recorded on the train sheets.

Mr. Strouss:

Q. On these train sheets the only instances where it is shown are those three, isn't that true? Three instances where it is shown that the air was applied from the caboose?

A. That is correct, three.

Q. You say these train sheets do not show any instance where there was an injury to an employee?

A. Not as the result of train separation or broken knuckle.

Q. It is a fact, isn't it, that on the Galena division, on the first day of August extra 2801 east with 90 cars the conductor was injured at Malta by a rough stop?

A. What date was that?

Q. August 4th?

A. That is correct, yes, rough stop caused the conductor to be injured. The train sheet does not indicate the extent of the injuries.

Q. It does indicate he was taken to a station called DeKalb and given medical treatment?

A. Yes.

Q. The 260 additional trains which you spoke of; those are all short trains, aren't they?

A. Yes, they are, all trains less than 70 cars.

Mr. Strouss: That is all.

The Court: May this witness be excused with his records.

Mr. Strouss: Yes.

The Court: It is so ordered.

(Witness excused.)

[fel. 1280] J. P. KILEY was called as a witness in behalf of the defendant, and being first duly sworn, testified as follows:

Direct examination.

Mr. Mason:

Q. Will you please state your name and residence to the Reporter?

A. J. P. Kiley, Chicago, Illinois.

Q. Are you in railroad service?

A. Yes, I am special representative of the Chief Operating Officer of the Chicago, Milwaukee, St. Paul and Pacific Railroad.

Q. Are you on the staff of the Chief Operating Officer of the company at Chicago?

A. Yes, sir.

Q. How long have you been in railroad service?

A. Steadily since 1915, except for one year when I was in the army during the World War, and prior thereto during two summer vacations while I was at school. I graduated from Villanova College in 1915 with the degree of Bachelor of Science in civil engineering and since that time I have been continually employed by the Milwaukee Road in the Engineering Department on construction as rodman and instrumentman, and on valuation as instrument [fol. 1281] man, cost engineer, assistant valuation engineer. During the last ten years I have been Assistant Chief Statistician and Engineering Assistant for the Chief Financial and Accounting Officer, and special representative of the Chief Operating Officer.

Q. Are you familiar with the Milwaukee system as a whole?

A. Yes, sir.

Q. In your position as special representative of the Chief Operating Officer do you have system-wide jurisdiction?

A. Yes, sir.

Q. Have you before you a map of one sheet bearing title "Chicago, Milwaukee, St. Paul and Pacific Railroad"?

A. Yes, sir.

Mr. Mason: May we have that marked as Defendant's Exhibit next in order?

The Court: It may be marked.

The Clerk: Defendant's Exhibit No. 93 for identification.

Mr. Mason:

Q. Is Exhibit No. 93 for identification a reasonably accurate outline map of the Milwaukee Railroad and the territory which it serves, Mr. Kiley?

[fol. 1282] A. Yes, sir, it does include some of the lines that are operated under trackage rights.

Q. It shows some of your principal terminals and gateways, does it?

A. Yes, sir.

The Court: This railway will hereafter be referred to as the "Milwaukee"?

Mr. Mason: It is frequently referred to as the Milwaukee, is it not?

A. That is right.

Q. Your literature and advertising calls it the Milwaukee Road?

A. That is right.

Mr. Mason: I must apologize for lapsing into railroad dialect a good deal.

The Court: That is all right.

Mr. Mason: Have you any questions on the exhibit, Mr. Strouss?

Mr. Strouss: No, I think not.

Mr. Mason: We offer the exhibit in evidence as Exhibit No. 93.

Mr. Strouss: Same objection.

The Court: Objection overruled, it may be admitted.

(The document referred to was received in evidence and marked Defendant's Exhibit No. 93.)

[fol. 1283]. Mr. Mason: Have you before you a statement of one sheet showing the title of the railroad and then the title "Freight Operating and Freight Transportation Expenses Related to Traffic, Calendar Years 1922 to 1939, Inclusive"?

A. Yes sir, I have.

Mr. Mason: May we have this statement marked No. 94 for identification.

The Court: It may be marked.

The Clerk: Defendant's Exhibit No. 94 for identification.

Mr. Mason: Will you state how No. 94 was prepared?

A. That was prepared from the annual reports to the Interstate Commerce Commission.

Q. Are those the annual reports on Form A?

A. Yes sir.

Q. The figures in Columns B, C and D, are those actually transcribed from the annual reports?

A. Except for the year 1928. On January 14, 1928 the receivership of the predecessor company of the present Milwaukee Road was terminated and during that year two annual reports were filed with the Interstate Commerce Commission, one covering the 14 days and the other cover-

ing the remainder of the year and the figures for 1928 are [fol. 1284] the combined figures of those two reports.

Q. The figures for the years 1922 to 1927 are from the reports of the predecessor company or its receivers?

A. That is right.

Q. And since 1929 inclusive for the present company or its management?

A. Yes, or its trustees.

Q. Are all of the reports from which these figures were taken available in the courtroom?

A. Yes sir, they are.

Q. I take it that the figures in Columns E and F are computed figures from the others?

A. Yes sir, they were computed in the offices in Chicago.

Q. And the figures in the blocks at the bottom where the totals are aggregated for four year periods are also computed from the face of the exhibit?

A. Yes sir.

Q. Have you checked the exhibit against the original sources?

A. Yes sir, I have.

Q. Will you say whether or not the transcribed figures and the computations are true and correct?

A. Yes, they are to the best of my knowledge and belief.

[fol. 1285] Mr. Mason: We offer the exhibit in evidence as Number 94 subject to any questions by opposing counsel.

Mr. Strouss: I have no questions at this time, but the same objection.

The Court: Objection overruled, it may be admitted in evidence.

(The document referred to was received in evidence and marked Defendant's Exhibit No. 94.)

Mr. Mason: With the exhibit we tender the underlying annual reports to counsel for their use if they desire.

Q. Mr. Kiley, have you a statement in one sheet being the title of the railroad and its trustees and the further title, "Freight Service Operating Averages, Calendar Years 1922" and so on to 1939?

A. Yes sir.

Mr. Mason: May we have this statement marked as Number 95.

The Court: It may be marked.

The Clerk: Defendant's Exhibit No. 95 for identification.

Mr. Mason: Did you prepare exhibit No. 95 for identification?

[fol. 1286] A. Yes sir.

Q. I take it that the source of the information at the foot of the sheet show the original sources from which it was taken or prepared?

A. Yes sir, it does.

Q. As to certain items there is a computation the character of which is shown by the notes opposite those particular items?

A. Yes sir, that is true.

Q. Are the Forms OS-A referred to on this exhibit for the years in question available and on hand in the courtroom?

A. Yes sir, they are.

Q. Did you use the Form called OS-E in any way in connection with this exhibit?

A. Not in connection with this exhibit.

Q. This is based entirely upon the annual report Form A and the Forms OS-A report?

A. That is right.

Q. And the computations in the column (m), are those your own?

A. They were made in our office; I didn't actually make the computations but they were checked.

Q. Is the exhibit a true and correct transcript or computation from the under-lying sources?

[fol. 1287] A. Yes sir, it is.

Mr. Mason: Have you any questions, Mr. Strouss?

Mr. Strouss: No, I have no questions at this time.

Mr. Mason: We offer the statement in evidence as Defendant's Exhibit No. 95.

Mr. Strouss: Same objection.

The Court: Objection overruled, it may be admitted.

(The document referred to was received in evidence and marked Defendant's Exhibit No. 95.)

Mr. Mason:

Q. Mr. Kiley, have you before you a statement in one sheet bearing the title of the railroad and the further title "Revenue Freight Carried during the year 1939"?

A. Yes sir.

Q. From what source was this statement prepared?

A. From the Form A, Annual Report to the Interstate Commerce Commission for the year 1939.

Mr. Mason: May we have this statement marked as No. 96 for identification.

The Court: It may be marked.

The Clerk: Defendant's Exhibit No. 96 for identification.

Mr. Mason: Are there any portions of this exhibit which [fol. 1288] represent your own computation?

A. The additions of the commodity classes 110 to 143; the remainder are taken from or just transcribed from the annual report.

Q. That annual report is one of the series of annual reports which you have already referred to as being available for the use of opposing counsel?

A. Yes sir.

Q. Is this exhibit true and correct as a transcription or computation from the figures appearing upon it?

A. Yes sir.

Mr. Mason: We offer the exhibit in evidence as Defendant's Exhibit No. 96.

Mr. Strauss: Same objection.

The Court: Objection overruled, it may be admitted.

(The document referred to was received in evidence and marked Defendant's Exhibit No. 96.)

Mr. Mason: Your Honor, this exhibit is now in typewriting and I believe a carbon copy of the original typewriting has been furnished to the Clerk. We will undertake to reproduce this in plan-o-graph and supply a copy for the permanent copy of the record.

The Court: The Court will permit the substituted copy.

[fol. 1289] Mr. Mason:

Q. Mr. Kiley, according to Exhibit No. 96 what is the principal description of the perishable fruit and vegetable traffic carried by your line?

A. Potatoes other than sweet; then oranges and grapefruit.

Q. Do the oranges and grapefruit come to you as a connecting line, as an intermediate line?

A. Yes, practically all of it.

Q. Do you know, and if so will you state at which gateway you receive oranges and grapefruit?

A. Principally it comes through the Council Bluffs gateway.

Q. Does it come to you at Kansas City to any extent?

A. To some extent, but not to the extent it does at Council Bluffs.

Q. Do you receive these cars of grapes and peaches at the Council Bluffs gateway likewise?

A. I think we get more peaches at Chicago than we do at the Council Bluffs gateway. That is not a very important part of it.

Q. From what territory do you handle the potatoes which are shown here?

A. Originating on our line we have the largest area of potatoes in Wisconsin and Washington.

[fol. 1290] Q. Those handled as connecting carrier, where do those reach your line?

A. I am not certain as to where they come from.

Q. Does your line handle a substantial volume of livestock?

A. Yes sir.

Q. Where does that originate?

A. Practically all over our entire system, Montana and the Dakotas, Iowa and Wisconsin.

Q. Do you serve any mining regions in which you originate a substantial quantity of products of mines?

A. Yes, we serve the Indiana mines; there are mines in Southern Indiana in the neighborhood of Terre Haute on what we call our Terre Haute Division; it is a line we lease from the Chicago, Terre Haute and Southeastern Railroad.

Q. Is this tonnage of products from mines principally coal?

A. Principally bituminous coal. Now, that is true both of the revenue freight originating on our lines and the revenue freight received from connecting lines. The connecting lines' tonnage of coal is principally from Illinois and eastern areas; eastern Kentucky, West Virginia, [fol. 1291] Pennsylvania.

The Court: We will recess until ten o'clock tomorrow morning.

(Thereupon the Court stood at recess until December 11, 1940, at 10 o'clock A. M.)

[fol. 1292]

December 11, 1940, ten o'clock A. M.

All parties being represented as heretofore noted, proceedings were resumed as follows:

The Court: Mr. Kiley, you may resume the witness stand.

J. P. KILEY was recalled to the stand, and testified further as follows:

Direct examination (Continued).

By Mr. Mason:

Q. Mr. Kiley, are you familiar with the code of rules, the operating rules, of the Association of American Railroads, to which reference has been made in the testimony of several witnesses.

A. I am not familiar with the rules themselves. I do know that we publish a code of rules with the Union Pacific, the Northern Pacific, and Great Northern.

Q. Are your rules the same as the rules of the Union Pacific, the Great Northern, and the Northern Pacific?

A. Yes, it is a consolidated book put out by all those.

Q. Do you have occasion, in the course of your duties, to make frequent trips over your system, Mr. Kiley?

[fol. 1293] A. Yes, sir.

Q. Do you make those trips on passenger trains entirely?

A. No, I make them occasionally on freight trains, but most of my trips are made in passenger trains.

Q. Do you ever ride locomotives?

A. Yes, sir.

Q. When you ride on freight trains, do you ride on the locomotive or the caboose?

A. Usually the caboose.

Q. Do those trips carry you to all parts of the Milwaukee System?

A. Yes, sir.

Q. Will you state whether the main lines of the Milwaukee are equipped with automatic block signals?

A. Partially. They are equipped with automatic block signals from Chicago to Council Bluffs, from Chicago to the Twin Cities, and from Minneapolis to Glencoe, Minnesota, and from Ortonville, Minnesota, to Aberdeen, South Dakota, and from Harlowton, Montana, to Seattle and Ta-

coma, exclusive of freight line between Plummer, Idaho, and Marengo, Washington.

The Court: Mr. Kiley, what is the total mileage of the [fol. 1294] Milwaukee, approximately?

A. Ten thousand, nine hundred.

Q. What percentage, roughly, would you say had the block signal system?

A. Between 25 and 30 per cent.

Mr. Mason: What percentage of your main line mileage is block signal equipped?

A. Of our primary main lines, it is, I would say, about sixty per cent, sixty-five per cent. On a part of the block signal territory we have cab signals. It was formerly an automatic train stop installation between Portage, Wisconsin, and Hastings, Minnesota. That is between Chicago and the Twin Cities on the main line, but the train stop portion of the installation was taken out under authority of the Interstate Commerce Commission, but the cab signals were retained.

Q. Mr. Kiley, have you before you a copy of Defendant's Exhibit No. 2?

A. Yes, sir.

Q. And from your observation of the box car equipment owned and operated by the Milwaukee, will you say, generally, whether the development of your box cars has been along the same lines as are indicated on the exhibit?

A. Generally, it has been. I think we went to the compo-[fol. 1295] site body a little later than the Southern Pacific, and went to the all-steel about the same time, but, generally, the development has been much the same as the Southern Pacific.

Q. Do you now operate in revenue service any cars of wooden underframe construction?

A. Of all wood cars, we do not.

Q. Will you refer, please, to Exhibit No. 4 and from your observation and knowledge of Milwaukee passenger equipment, state whether the development of passenger-train cars on the Milwaukee has proceeded along the lines indicated by that exhibit?

A. There are a few things that are different. On the Milwaukee we have always used six-wheel trucks, com-

pared with the four-wheel trucks you have shown on this exhibit. We also operate our own sleeping cars, and until 1927 we operated all of the sleeping cars that were operated on the Milwaukee; but we have had very little development from 1915 to 1934. Our Puget Sound lines were completed in 1909, and between 1909 and 1915 we acquired a very large number of steel cars, including sleeping cars, and between 1915 and 1934, those cars were used on all of our principal trains. We did modernize them somewhat from time to time, [fol. 1296], but we purchased no new cars between 1915 and 1934, except some head-end cars and a couple of dining cars. Between 1934 and 1939, we acquired a large number of light weight streamlined passenger cars, coaches, dining cars, parlor cars, and so forth, for use on our streamlined trains as well as our primary passenger trains.

Q. Are the sleeping cars which the Milwaukee owns and operates on its line generally similar in construction to the standard Pullman sleeping car?

A. Yes, we do now have on our principal trains Pullman-operated and Pullman-owned sleeping cars, but we still operate all the tourist cars that are operated on our railroad and, in addition, operate some of the less important trains with our own sleeping cars.

Q. Do you have passenger-carrying equipment similar in general appearance and design to the articulated units shown for 1937 and 1939 on exhibit No. 4?

A. No, we don't have any articulated units.

Q. Those recently acquired passenger-carrying cars are used on what particular trains of the Milwaukee?

[fol. 1297] A. On the Hiawathas, which are our streamlined, high-speed trains, our Chippewa, which is also a high-speed train.

Q. Between what points?

A. The Chippewa, between Milwaukee and Chicago, and the Northern Wisconsin and Michigan, along the lake shore of Michigan; the Hiawathas operate between Chicago and the Twin Cities, and also go into the Wisconsin Lakes country about in the middle of Wisconsin, and today we are putting on a new Hiawatha, the same type of equipment, between Chicago and Omaha, Sioux City and Sioux Falls.

[fol. 1298] Mr. Mason: Will you refer to defendant's exhibits Nos. 5 and 6 which present the chronology of locomotive development on the Southern Pacific. Does the Mil-

waukee have any steam locomotives corresponding to the types or any of the types indicated on those exhibits?

A. We have in the freight locomotives only Consolidation and Mikado types that are indicated on this exhibit. We formerly had some Mogul type locomotives, not a very large number but they have been retired for a number of years.

Q. What is the tractive effort of your Mikados?

A. We have two types; one a tractive effort of 54,700 pounds and the other approximately 63,000 pounds. We have a next size, larger than Mikado, a 4-8-4 type of locomotive, I think some of them call it the "Golden State" and the others the "Northern" but that is our primary freight power on our principal main lines.

Q. What is its tractive effort?

A. 71,000 pounds approximately.

Q. That is the type which corresponds in wheel arrangement to the locomotives shown at the foot of exhibit No. 5, is that correct?

A. Yes, sir.

Q. But you use it for freight service?

[fol. 1299] A. Yes, we also use some of those units in passenger service and we have two smaller units of that same type which are used exclusively in passenger service.

Q. Do you have other types of locomotives other than those corresponding to those shown on Exhibit No. 6?

A. Yes, and in addition we have a 4-6-4 Hudson type passenger locomotive that is used on practically all of our principal trains.

Q. What is the tractive effort of the Hudson?

A. 45,000, except for some of the streamlined Hudson type locomotives that are used on our high-speed trains which have a tractive effort of 50,000 pounds and in addition we have some streamlined, that we call the "Hiawatha" type locomotives with a wheel arrangement of 4-4-2.

Q. Do you use the Pacific type locomotives on the Milwaukee?

A. Yes, we have a large number of Pacific types used principally on secondary passenger trains. In addition to the steam locomotives we have a large number of electric locomotives as we operate about 650 miles of our railroad electrically.

Q. Between what points?

[fol. 1300] A. Between Harlowton, Montana, and Avery, Idaho, and between Othello, Washington, and Tacoma, Washington. That crosses the big belt, the Continental Divide, and the Bitter Root Mountains between Harlowton and Avery and the Saddle and Cascade Mountains between Othello and Tacoma.

Q. Do you have a steam locomotive of the Mountain type?

A. No, we have no Mountain type locomotives. We do have some Articulated locomotives that we use between Avery, Idaho, and Othello, Washington, with a wheel arrangement of 2-6-6-2 and a tractive effort of about 80,000 pounds.

Q. About what is the length of the ordinary run of your freight power in ordinary freight service, first on the districts east of the Missouri River or the Twin Cities?

A. Our freight power on through trains operates from Chicago to the Twin Cities, a distance of 420 miles and between Chicago and Council Bluffs, a distance of about 480 miles.

Q. West of the Twin Cities do you operate your freight locomotives for corresponding distances?

A. For longer distances. We operate from the Twin Cities to Harlowton, 907 miles I believe.

Q. Without change?

[fol. 1301] A. Without change. They are serviced at intermediate stations but we operate the locomotives through.

Q. That is, they are not taken out and taken to roundhouses at intermediate points, are they?

A. Only where it is necessary to go to the roundhouse to get coal and water. We do not have coaling stations on all our main lines and where it is necessary for them to get coal they go to the roundhouse to get coal but they do not go to the roundhouse for service.

The Court:

Q. How many changes in train crews would you have in that?

A. Between Twin Cities and Harlowton I believe there are five.

Mr. Mason:

Q. Do you make similar runs for your passenger power?

A. Yes, sir.

Q. Do you change passenger locomotives on your through trains between Chicago and the Twin Cities?

A. No, sir.

Q. Or between Chicago and the Missouri River points?

A. No, sir.

Q. Are these steam locomotives equipped with super-heaters?

[fol. 1302] A. Yes, sir.

Q. Keel water heaters?

A. Yes, sir.

Q. What character of air compressors are applied to them?

A. I am not familiar with the air compressors.

Q. Are you familiar with the ruling grades encountered on the various parts of your system generally?

A. Yes, sir.

Q. Do you have any ruling grades on any part of the principal main lines where helper locomotives are required?

A. We use helpers regularly at several points and we have several points where we do not use them regularly. Between Chicago and the Twin Cities we use helpers out of Milwaukee over what we call the "Brookfield Hill," it is just out of Milwaukee and it is a ruling grade for the district west of Milwaukee. That is the only place where we regularly employ helpers westbound between Chicago and the Twin Cities. Eastbound we use helpers regularly on some of the trains between Sparta and Tunnel City and occasionally we have one of the yard engines help the trains out of Milwaukee yard over what we call the "Lake Hill."

[fol. 1303] Q. What is the ruling grade at the point where you use helpers immediately west of Milwaukee?

A. .67 of one per cent.

Q. And the ruling grade at Sparta and eastward from there?

A. The same, .67.

Q. Do you have any helper districts between Chicago and Council Bluffs?

A. Yes, we have two helper districts between Chicago and Savanna but we do not always use helpers on those districts. One is the Elgin Hill and the other is the hill just out of Savanna, they are one per cent ruling grades.

Q. What is to the ruling grades in the territory between Chicago and Harlowton where you employ steam locomotives?

A. One per cent. We use helpers between Milbank, South Dakota, and Summit, a distance of about 15 miles. That is the only point between Minneapolis and Harlowton where we have regularly employed helpers westbound. Eastbound we have helpers between Mobridge and Alamo and occasionally use helpers east of Aberdeen, South Dakota. We also use helpers in the vicinity of Rhame, North Dakota.

Q. In the territory where you employ electric locomotives is it necessary to use helpers or do you accomplish [fol. 1304] the same results by coupling in additional electric units?

A. We use helpers. Our regular electric locomotives are three-unit electric locomotives having a tractive effort of about 170,000 pounds but over the maximum and ruling grades we cut in additional helpers some of which are three-unit electric locomotives and some of which are two-unit electric locomotives.

Q. What are your ruling grades in the electrified territory?

A. They vary from one to 2.2 per cent.

Q. You have a maximum ruling grade in the mountainous territory of 2.2 per cent?

A. Yes, westbound. Eastbound our maximum ruling grade is 1.75 per cent.

Q. Does the Milwaukee participate in schedules relating to the movement of eastward or westward freight?

A. Yes, sir.

Q. You have heard the testimony of previous witnesses regarding schedules for the movement of perishable freight originating in California and related Pacific Coast territory?

A. Yes, sir.

Q. Does your company participate in schedules on traffic [fol. 1305] moving through the Kansas City and Council Bluffs gateways?

A. Yes, sir.

Q. Is that on the same basis as the other Missouri River lines?

A. I am not familiar about the run-off. I know that we make the same connections and the same time as the other railroads.

Q. Do you also have schedules for traffic from the north Pacific Coast?

A. Yes. Of course we operate ourselves to and from the north Pacific Coast and those are our own schedules.

Q. Does the Milwaukee handle any traffic moving in Pacific Fruit-Express cars?

A. Yes, sir.

Q. Where do you receive such traffic?

A. At Kansas City and at Council Bluffs.

Q. Do you handle other perishable traffic moving in other types of refrigerator cars?

A. Yes, sir.

Q. What other refrigerator cars generally speaking are operated on the Milwaukee?

A. Principally the U. R. T. cars.

Q. Is that a type of car similar to the Pacific Fruit Express car?

[fol. 1306] A. Yes, sir.

Q. What is the "U. R. T."?

A. It is the Union Refrigerator Transit.

Q. Have you before you, Mr. Kiley, a statement in one sheet bearing the title, "Chicago, Milwaukee, St. Paul and Pacific Railroad Company," etc., "Typical Examples of Freight Trains Handled between Certain Terminals, March 1st-10th, Inclusive, 1939"?

A. Yes, sir.

Q. Was this statement prepared by you or under your direction?

A. Yes, sir.

Mr. Mason: May the statement be marked No. 97 for identification.

The Court: It may be marked.

The Clerk: Defendant's exhibit No. 97 for identification.

Mr. Mason: Q. From what sources was it prepared?

A. From the train sheets.

Q. Are the train sheets from which this exhibit was prepared available for the examination of opposing counsel?

A. They now have them in their possession.

Q. From what sources did you obtain the information as to ruling grade shown in column D?

[fol. 1307] A. From the engineer's profiles.

Q. Are those likewise available for the use of opposing counsel?

A. Yes, sir.

Q. With reference to exhibit No. 93, the map of the Milwaukee system, have you indicated thereon by heavy black line the districts to which exhibit No. 97 for identification relates?

A. Yes, sir.

Q. Will you say whether or not the exhibit includes any purely local trains or only the trains which operated from terminal to terminal as indicated by the from and to columns on the exhibit?

A. It only includes trains that operated throughout the subdivision marked "From" and "To." For example, from La Crosse to St. Paul it only includes trains that operated clear from La Crosse to St. Paul.

Q. Does it include trains doing local or way-freight work in that territory if they made the through trip?

A. Yes, sir.

Q. Who selected the period represented on the exhibit?

A. I did.

Q. For what reason?

[fol. 1308] A. I wanted to get a typical period, I didn't want to get the high period or a low period, and March is more nearly an average period than any we have, the month of March.

Q. Is that statement based upon your general knowledge of the Milwaukee operations?

A. Yes, sir.

Q. Has the exhibit been compared with the original sources to determine its correctness?

A. Yes, sir, it has.

Q. Will you say whether or not in your opinion it is true and correct?

A. Yes, it is, to the best of my knowledge and belief.

Q. I take it that the computations shown at the bottom of the sheet showing the total and percentages of various classes of trains are your own computations?

A. Yes, sir, they are.

Q. The statement "Maximum Cars per Train," does that indicate the largest number of cars in any one train which may have operated between the points opposite which the maximum number of cars per train is shown?

A. Yes, sir, that does.

Mr. Mason: Have you any questions, Mr. Strouss?
[fol. 1309] Mr. Strouss: No questions.

Mr. Mason: We offer the statement in evidence as defendant's exhibit No. 97.

Mr. Strouss: Same objection.

The Court: Objection overruled, it may be admitted.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 97.")

Mr. Mason: Q. I notice on exhibit No. 97 the line showing operations from La Crosse, Wisconsin, to St. Paul, Minnesota, you show 14 trains of 70 cars or less having an average over-all total consist of 48 cars and one other having an actual over-all total consist of 68 cars. Will you state what those trains were?

A. Of the 15 trains, 9 of those were way-freights that operated from La Crosse to St. Paul. In that territory we operate way-freights in only one direction and 9 of those 15 trains were way-freights, handling the local work.

Q. Between La Crosse and Portage, Wisconsin, there are two blocks shown. Is the same statement true as to the same trains shown in the collective columns headed "70 Cars or Less"?

A. I am not certain of that, I would have to make another [fol. 1310] check of the train sheets.

Q. That could be ascertained by an examination of the train sheets?

A. Yes, sir.

Q. You show on the last line of trains on the exhibit the operation between West Clinton, Indiana, and Terre Haute, Indiana, and indicate that there were 32 trains having an average over-all consist of 52 cars. Have you checked the train sheets to determine what the nature of those trains was?

A. No, I have not.

Q. What is the nature of the traffic carried in the territory extending down to Terre Haute between Bensenville, Illinois, and Terre Haute, Indiana?

A. Northbound it is practically all coal. That is the line that extends down into the Indiana coal fields, and northbound it is all coal and southbound it is miscellaneous traffic.

Q. Do you have any flow of returning empties south-bound?

A. A very large amount of empties.

Q. Do you have before you a statement bearing the title of the company and the further title, Maximum Number of Cars Handled in Selected Through Main Line Passenger Trains Operating between Chicago and Minneapolis [fol. 1311] during Months of January, April, July and October, 1939'?

A. Yes, sir.

Q. Did you prepare this statement or supervise its preparation?

A. Yes, sir.

Mr. Mason: May we have the statement marked "Defendant's Exhibit No. 98"?

The Court: It may be marked.

The Clerk: Defendant's exhibit No. 98 for identification.

Mr. Mason: Q. From what sources was this exhibit prepared?

A. From the train sheets.

Q. Do you have available or have you made available, to opposing counsel the train sheets from which the information on the statement was taken?

A. Yes, sir.

Q. I notice in the title you say, "Selected Through Main Line Passenger Trains." What was the occasion for the selection?

A. We eliminated from, or rather we did not include two strictly local accommodation trains that operated between Chicago and Minneapolis. They handle principally local [fol. 1312] mail and express and a few passengers.

Q. Then this includes what might be called your principal through main line passenger trains between these two points?

A. That is right.

Q. And all of them?

A. Yes, sir.

Q. All that were operated during the four-month period shown?

A. Yes, sir.

Q. Did you select the period?

A. Yes, sir.

Q. For what reason?

A. To get a representative period for a year. I did not believe we would get as representative a period by taking just a few days in one month.

Q. Will you say whether or not the showing for these four months is a reasonably accurate cross-section of the year's business?

A. Yes, sir, it is.

Q. Has the exhibit been compared against the original sources?

A. Yes, sir, it was.

Q. Will you state whether or not it is true and correct?

A. Yes, sir, it is.

[fol. 1313] Q. Are any of these trains handled by other than steam locomotives?

A. No, sir, they are all operated with steam locomotives.

Q. Are any of these trains overnight trains with Pullman equipment?

A. Yes, the Pioneer Limited and the Olympian have Pullman equipment and train No. 56, the eastbound Fast Mail, has Pullman equipment. Train No. 57 is a solid mail and express train.

Q. Does the Olympian westward end its run at Minneapolis?

A. No, sir, it operates to Tacoma.

Q. Are there any intermediate points between Chicago and Minneapolis at which these trains either pick up or set out cars so as to vary the number of cars in the train?

A. Yes, the Pioneer Limited, the Olympian, and the Fast Mail all pick up and set out cars. The Hiawatha trains do not pick up or set out at intermediate points.

Q. What is the principal intermediate point at which cars are picked up or set out?

A. Milwaukee. They also pick up, for example, the Olympian westbound picks up cars at Milwaukee, sets out cars at New Lisbon which is a junction point for a line [fol. 1314] operating into the northern Wisconsin territory.

Q. What is the distance from Milwaukee to the Twin Cities, approximately?

A. 336 miles.

Mr. Mason: Have you any questions, Mr. Strauss?

Mr. Strauss: No.

Mr. Mason: We offer the exhibit in evidence as defendant's exhibit No. 98.

Mr. Strouss: The same objection.

The Court: May I ask, Mr. Kiley, if you have the original records from which both this exhibit No. 98 and No. 97 were taken; are they here in court and available for counsel?

A. Yes, counsel has the records, the train sheets covering the freight exhibit, No. 97, and he advised that he did not desire at this time the train sheets for exhibit No. 98. They were offered to him yesterday, they are in the city.

The Court: All right, objection overruled. It may be admitted.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 98.")

Mr. Mason:

Q. Mr. Kiley, your railroad operates in a territory where severe winter weather is sometimes encountered, does it [fol. 1315] not?

A. Yes, sir.

Q. Do you have, and if so will you state whether any difficulties have been encountered in the heating of the rear cars of trains of 15 or more passenger cars?

A. I have never heard of any.

Q. Do you have any rule limiting the length of the passenger trains to be operated by you during severe winter weather in, for example, this district between Chicago and Minneapolis?

A. We do not have any rule that I know of.

Q. Do you have any rule limiting the lengths of the freight trains to be operated by you on any of your main line districts?

A. No, sir.

Q. Referring to exhibit No. 97 again, will you say whether operations of freight trains on others of your principal main line districts not represented on the exhibit are in train lengths approximating those shown here?

A. Yes, if we have enough traffic.

Mr. Strouss: My objection is going to this testimony and I particularly want to call the court's attention to this last question.

The Court: Will you read the last question?

[fol. 1316] (The last question was read by the reporter.)

The Court: If that information is being taken from the record, the objection will be sustained.

Mr. Mason: I will ask the witness further to say whether the answer is based upon your general knowledge and observation of system operations or based upon any particular record?

A. It is based upon my knowledge of our regular operation.

The Court: The objection then is overruled.

Mr. Mason: I think that is all, thank you, Mr. Kiley.

Mr. Strouss: I desire to defer my cross-examination of this witness.

The Court: You may step aside.

(Witness temporarily excused.)

[fol. 1317] Mr. Mason: Do you wish to proceed with the cross-examination of Mr. Warfel?

Mr. Strouss: No, I am not ready yet. One of my men has been sick during the last two days, and it has slowed me up in going over these train sheets.

Mr. Mason: Call Mr. Peckenpaugh.

C. D. PECKENPAUGH was called as a witness on behalf of the defendant and, being first duly sworn, testified as follows:

Direct examination.

By Mr. Mason:

Q. Will you please state your name and employment to the reporter, Mr. Peckenpaugh?

A. C. D. Peckenpaugh, General Manager, Burlington Lines, in Texas.

Q. The Burlington to which you refer, is the Chicago, Burlington & Quincy Railroad Company, is it not, Mr. Peckenpaugh?

A. That is correct.

Q. And it is generally referred to in railroad circles and in its literature as the Burlington?

A. That is right.

Q. How long have you been with the Burlington?

A. Fifty years in September.

[fol. 1318]. Q. What was your first employment by the Burlington?

A. I entered service as telegraph operator in September, 1890. I have been continuously in the service of the Burlington since that time.

Q. From telegraph operator, were you promoted to various other positions?

A. Yes; I was promoted to train dispatcher, chief dispatched, trainmaster, superintendent of various divisions of the Burlington, then general superintendent on various parts of the territory, and for the past four and a half years I have been general manager of the Texas line.

Q. Mr. Peckenpangh, have you before you a map of one sheet and bearing reference to the Chicago, Burlington and Quincy Railroad Company?

The Court: You will hereafter refer to that as the Burlington line?

Mr. Mason: Yes, for convenience.

A. Yes, I have.

Mr. Mason: May we have the map marked for identification?

The Court: It may be marked.

The Clerk: Defendant's Exhibit No. 99 for identification.

Mr. Mason: Looking at the map, Mr. Peckenpangh, will [fol. 1319] you say whether or not it is a reasonably accurate outline map of the lines of the Burlington and the territory it serves?

A. It is not drawn to scale, but it indicates the various lines.

Q. And the significance of the heavy black lines, you will explain later in connection with another exhibit?

A. That is right.

Mr. Mason: We offer the map in evidence as Defendant's Exhibit 99.

Mr. Strouss: The same objection.

The Court: Overruled. It may be admitted.

(The document referred to was received in evidence and marked, "Defendant's Exhibit No. 99.")

The Court: What is the total mileage of the Burlington, Mr. Peckenpaugh?

A. The Burlington proper, 9000 miles; the Burlington System lines, 14,000 miles.

Mr. Mason: This map includes all of the Burlington System lines, does it, Mr. Peckenpaugh?

A. Yes, that is correct.

Q. The entire 14,000 miles of the system?

A. That is correct.

Q. A large portion of that is branch lines, is it not, Mr. Peckenpaugh?

[fol. 1320] A. Yes, a goodly portion of our lines are branch lines in Missouri, Nebraska, Iowa, and Kansas. Probably divided fifty-five per cent branch mileage, forty-five per cent main line mileage.

Q. Will you start at Chicago, will you describe the stations through which your principal main lines to the west and northwest extend?

A. From Chicago through Aurora, Galesburg, Omaha, Lincoln, McCook to Denver, one of our principal main lines; from Chicago through Aurora, Savanna, LaCrosse to St. Paul, Minnesota, is a principal main line; from Lincoln northwest through Alliance, Nebraska, Sheridan, Wyoming, to Billings, Montana, is a principal main line; from Galesburg south through Beardstown to Centralia and on is our principal coal-carrying line to the Southern Illinois territory; from Kansas City to Omaha is a principal main line; from McCook east through St. Joseph, not indicated on the map, and on in to Kansas City, is a principal main line.

Q. With what railroads do you connect at Billings, Montana?

A. With the Northern Pacific and the Great Northern.

[fol. 1321] Q. Do you have an end to end connection with the same railroads at Minneapolis or St. Paul?

A. At St. Paul, yes.

Q. Do you have any important connections at Denver?

A. Yes, sir, the Rio Grande, Union Pacific and Santa Fe.

Q. By the Rio Grande, you refer to the Denver and Rio Grande?

A. Yes, sir.

Q. And the Santa Fe, of course, is Atcheson, Topeka & Santa Fe?

A. Correct.

Q. Are you familiar with the code of operating rules of the Association of American Railroads, Mr. Peckenpaugh?

A. Yes, very much so. I have been a member of the Train Rules Committee of the Burlington System for many years.

Q. Do you have a printed code of operating rules on the Burlington?

A. Yes, sir.

Q. Does it resemble the standard code of the Association of American Railroads?

A. It conforms very closely to the standard code.

[fol. 1322] Q. In your capacity as a division and system officer of the Burlington in the past, have you made, and do you now make frequent trips over the system?

A. Yes, I do.

Q. Do you, in the course of those trips, observe operations on the railroad?

A. Yes, sir.

Q. Is it part of your duties to make such observations and report upon them if necessary?

A. That is correct.

Q. Have you, in the course of your career with the Burlington, been a supervising officer on all parts of the system shown on Exhibit 99?

A. With the exception of the territory in the Omaha-Lincoln, in the immediate territory around Omaha and Lincoln, I have been a supervisory officer or employee on all parts of the Burlington line.

Q. Are you familiar, from observation and association, with the territory around Omaha and Lincoln?

A. I am.

Q. Do you know and, if so, will you state, based upon your own knowledge, what the standard weight of rail is in your principal main lines?

[fol. 1323] A. Yes. We have somewhat different standards for different lines. The Chicago main line west towards Denver, 131-pound rail; the Chicago-St. Paul line, 112-pound rail; other lines, 100 and 110-pound rail. On some of our lesser important main lines, the Kansas City line, for example, 90-pound rail.

Q. Now, on this principal main line from Chicago to Denver, has the 131-pound rail, now standard, replaced lighter weight of rail previously in the tracks?

A. That is right.

Q. What is the standard of maintenance as to ballast, if you know of your own knowledge?

A. Yes. The territory, Chicago to Galesburg, is largely lead chatt ballast; from Galesburg to Omaha, gravel; from Omaha to Denver, more or less, slag.

Q. Are the Burlington main lines equipped with block signals to any extent?

A. The main lines to a considerable extent, almost, with the exception of the line between Lincoln and Billings and between McCook and Kansas City, they are all automatic or other form of signals.

Mr. Strouss: Between Billings and what point was [fol. 1324] that?

A. Lincoln and Billings. There are some signals, but it isn't throughout.

Mr. Mason: Does the Burlington have any double or other multiple track mileage?

A. Yes.

Q. Will you describe, briefly, where it is?

A. The mileage, Chicago to Aurora, 37 miles, is multiple track mileage; from Aurora to Galesburg and to Omaha, double tracks; some double track between Omaha and Lincoln; all double track between Savanna and St. Paul; double track between Beardstown and Zeigler Junction, a short distance south of Herrin; double track between Kansas City and Napier, which is 35 miles north of St. Joseph, Missouri, and which is 97 miles north of Kansas City. Then there are other short stretches of double tracks in various locations.

The Court: What percentage of your main lines is double-tracked, approximately?

A. Approximately twenty-five per cent.

5 The Court: We will take our morning recess.

(Thereupon, a short recess was taken, after which the witness C. D. Peckenpaugh was recalled to the stand, and proceedings were resumed as follows:)

[fol. 1325] The Court: You may proceed.

Mr. Mason: Mr. Peckenpaugh, are you familiar with the rolling equipment, particularly locomotives and cars, owned and operated by the Burlington?

A. I am.

Q. I will ask you to refer to defendant's exhibit 2 showing the development of freight boxcars of the Southern Pacific Company?

A. Yes.

Q. Will you say, from your knowledge of the Burlington equipment, whether the development of your boxcars as to design and construction has proceeded along lines similar to those indicated by exhibit No. 2.

A. Yes, very similar to those.

Q. Do you now operate any cars of wooden underframe or other all wooden construction in revenue service on the Burlington?

A. No, not in revenue service. We have old boxcars, wooden boxcars used in company service outfit cars, not in revenue service.

Q. By "outfit cars" you refer to cars used by work parties out on the line?

A. Yes, maintenance of way gangs.

Q. Does the Burlington employ refrigerator cars?

[fol. 1326] A. Yes.

Q. Are you familiar with the Pacific Fruit Express Company car?

A. Yes, sir.

Q. Do you handle any of that type of car on the Burlington?

A. Yes, we handle a considerable number of P. F. E. cars in refrigeration service.

Q. Do you handle other refrigerator cars besides the P. F. E. cars?

A. Yes, sir.

Q. What other type predominates?

A. We handle—I would say the next largest number of cars would be the S. F. R. D., Santa Fe Refrigerator Dispatch cars, the U. R. T., A. R. T.

Q. What is the full name?

A. American Refrigeration Transit, Union Refrigerator Transit; we have the B. R. E. X., the Burlington Refrigeration Express car.

Q. All of those types are refrigerator cars?

A. That is right.

Q. Are they equipped with ice bunkers and insulation?

A. That is correct.

Q. Do they resemble the Pacific Fruit Express Company car?

[fol. 1327] A. A very similar car.

Q. Are those refrigerator cars subject, if you know, to the rules respecting interchange of equipment of the Association of American Railroads?

A. They are.

Q. Will you look at exhibit No. 4, and state whether the passenger equipment of the Burlington has been developed along lines similar to those indicated there?

A. Yes, this represents quite completely our development of passenger equipment.

Q. Does your present-day passenger equipment include the streamlined construction and the articulated units indicated for 1937 and 1939?

A. They do.

Q. It is a fact, is it not, that the Burlington was rather a pioneer in the development of that type of passenger equipment?

A. That is correct. The Burlington type of lighter weight streamlined equipment is more closely allied with the Budd built car rather than the Pullman built car; the Budd car being a shotweld, stainless steel car, while the other represents a different type of construction, and a little different type of steel, that is the Cor-Ten steel rather [fol. 1328] than the stainless steel.

Q. Are the Burlington cars used in your streamlined trains similar in general appearance and equipment to those shown here?

A. That is right.

Q. Do you operate steel passenger cars of the conventional appearance as well?

A. That is correct.

Q. Do you have any passenger cars of wooden underframe construction in service?

A. Not in revenue service. We also have a wooden set-aside, antiquated coach that we use in company service for maintenance gangs, or in camp service, but not in revenue service.

Q. Now, will you refer to the locomotive exhibits, Nos. 5 and 6, and directing your attention first to No. 5, will you

state whether the Burlington has types of freight locomotives corresponding in general design and characteristics to those shown on exhibit No. 5?

A. Yes, we have.

Q. For example, do you employ the Mikado type of locomotive?

A. Yes, we have a large number of light and heavy Mikado locomotives.

Q. What is the tractive effort of your heavier Mikados?

[fol. 1329] A. About 67,000 pounds. Just a second, I will correct that—66,640.

Q. Are those used in general freight service, main and branch line?

A. Largely main. Not so much on branch lines.

Q. Do you have in service any consolidation type locomotives?

A. Yes, on our branch lines.

Q. Do you have the 2-10-2, sometimes called the Santa Fe type locomotive?

A. Yes, we have.

Q. Are they larger or smaller than those shown on the exhibits?

A. Just a little larger. Our Santa Fe type locomotive rates 81,125 tractive pounds.

Q. Are those used in main line service principally?

A. Yes, sir.

Q. Do you have other types of freight power corresponding to, if not identical with, the others shown on the exhibit?

A. Yes, we use a Texas type, that is a 2-10-4 wheel arrangement, with tractive power of 83,300, and we use in fast freight service a type, I have heard designated as a Northern, we designate that as a Mohawk type of 4-8-4, [fol. 1330] with a tractive power of 67,500. Then we also use in our Black Hill territory in the vicinity of Deadwood, South Dakota, the articulated Mallet compound 2-8-8-2 type, with a tractive power of 90,000 pounds.

Q. Will you refer to exhibit No. 6, which shows the types of passenger locomotives. Do you have locomotives corresponding to those shown on the exhibit, and, if so, will you designate?

A. We have the light and heavy Pacific type, the 4-6-2 type; we have the mountain type, 4-8-2; we use the Hudson type, the 4-6-4, and the Mohawk previously described,

which is a flexible engine used in both fast freight and fast heavy passenger service.

Q. Are your Pacific type locomotives of the heavier class more powerful or less so than those shown as the heavier class on exhibit No. 6?

A. Slightly heavier. Our heavy Pacific type rates 47,000 pounds; our light Pacific type rates 38,382.

Q. As to your mountain type engines, what is the tractive effort?

A. 52,750, just a little less than the Southern Pacific type.

Q. You have also referred to the Hudson or 4-6-4 type [fol. 1331] locomotive; what tractive effort does that have?

A. That rates 47,700, but has a much greater sustained boiler capacity, carrying 250 pounds of steam, and has a large combustion chamber and fire box.

Q. Do you use coal or oil predominantly as fuel for your locomotives?

A. Predominantly, coal.

Q. Are these locomotives of the classes used in through main-line freight and passenger service, when fired by coal, when using coal, rather, fired by hand or fired by stokers?

A. Fired by stokers.

Q. Are any of your locomotives equipped with superheaters?

A. Practically all.

Q. And are they equipped, also, with feed water heaters?

A. Yes, sir, they are modernized engines, siphons, feed water heaters, circulators, outside steam pipes, modernized engines.

Q. What type of air compressor do you use?

A. We use a double cross-compound, eight and a half inch pump.

Q. Do the tender capacities in gallons of water correspond [fol. 1332] to those shown for corresponding types on exhibits 5 and 6?

A. Yes, we run from ten, twelve, up to twenty-one thousand gallons of water, 16 to 24 tons of coal.

Q. How far do you run these steam locomotives in main-line freight service?

A. We operate between Chicago and the Twin Cities, 430 miles; between Chicago and Lincoln, Nebraska, 535 miles; Lincoln to Denver, 483 miles; Chicago to Kansas City, slightly less than 500 miles.

Q. Now, do those through runs that you have described extend over more than one freight crew district?

A. Yes, they do.

Q. There are several changes of freight crews between Chicago and the Twin Cities, for example, aren't there?

A. There would be three freight crews, two passenger crews.

Q. In general, what is the approximate length of the run of a freight train crew in through main-line service?

A. A minimum of 100 miles. It runs from 100 to 150 miles.

[fol. 1333] Q. You speak of a minimum of 100 miles.

A. We try to space our terminals not closer than 100 miles, because 100 miles constitutes a minimum day in freight service.

Q. Why does it constitute a minimum day?

A. Under contracts and schedules with the labor organizations, they are paid on the basis of a hundred miles for a minimum day.

Q. Is that a more or less standard provision in the working agreements with which you are familiar?

A. It is.

Q. Are you familiar with the ruling grades in the various parts of the Burlington System, Mr. Peckenpaugh?

A. Yes, I am.

Q. Are there any districts in which the ruling grades are such as to require helper service on your through main-line freight trains?

A. Yes. We have a short helper district between Burlington and West Burlington, Iowa, which is a distance of only about four miles, where the railroad line raises from the Mississippi river bottom up onto the table 1.19 grade. That is the only helper district between Chicago and Denver.

[fol. 1334] Q. Do you have any helper districts between Chicago and the Twin Cities?

A. No, we do not.

Q. Do you have helper districts on the line between Lincoln via Alliance, Nebraska, to Billings?

A. Yes, we have helper districts out of Edgemont, South Dakota, to the first station east, eight miles; from Crawford, Nebraska, to Belmont, Nebraska, a distance of approximately 14 miles. The grade is 78, that is 1.5.

Q. You mean 78 feet to the mile?

A. Yes; that is 1.5. Then we have a helper district between Sheridan, Wyoming, and Ulm, a distance of 26 miles, where we double-head and also use a pusher for three miles out of Sheridan.

Q. Do you have any helper districts on the Colorado and Southern and Fort Worth and Denver portions of the system?

A. We have on the Colorado and Southern, but not on the Fort Worth and Denver.

Q. Do you know, and if so will you state, whether the Burlington maintains schedules for the handling of freight over its lines?

A. Yes, we do.

Q. Do you participate in schedules related to the handling [fol. 1335] of freight by yourselves and connecting carriers?

A. We are a party to the agreements.

Q. Do those include schedules for the handling of freight between Chicago and related terminals on the one hand, and Pacific Coast points on the other.

A. That is correct.

Q. Through what gateways and by what routes do those schedules apply over the Burlington?

A. Through the gateway of Billings, Montana, through St. Paul, Minnesota, through Denver, Colorado, through Council Bluffs, Iowa, through Kansas City, Missouri.

Q. Does your line, as a line extending from Council Bluffs to Chicago, handle freight moving on schedule east and westbound in conjunction with the Union Pacific at that point?

A. To a limited extent, yes.

Q. Do you also handle freight on schedule through the Denver gateway jointly with your connection at that point, the Denver and Rio Grande and Santa Fe?

A. That is correct.

Q. Does your traffic through the Denver gateway include [fol. 1336] any traffic originating in Arizona or California?

A. Yes, through the Dalhart gateway with the Rock Island, thence Denver and east.

Q. Do you receive any Arizona traffic originating on the Santa Fe and moving through the Denver gateway?

A. Santa Fe and Southern Pacific, lettuce, peas, pumpkins, cantaloupes, and some fruit.

Q. Does the Burlington participate in the run-off time on these perishable schedules which have been mentioned by previous witnesses?

A. We do.

Q. Are you familiar with the details of the westbound schedules from Chicago and related points to the Pacific Coast destinations?

A. Probably not to the extent I am with the east as to the over-all time. I am familiar with our schedules from Chicago west to Denver and St. Paul, into that area.

Q. What is your scheduled time on westbound freight moving in schedules to the Pacific Coast from Chicago to the Twin Cities?

A. Merchandise train out of Chicago at ten A. M. due into the Twin Cities at two A. M., sixteen hours. Merchandise train out of Chicago at ten P. M. due into the Twin Cities [fol. 1337] at 6 P. M., twenty hours; 16 hours and 20 hours.

Q. What is your scheduled time from Chicago to Denver on westbound transcontinental traffic?

A. No. 67, out of Chicago at 7:50 A. M. due into Denver 3:45 A. M., 43 hours; 61, due out of Chicago at 10:00 P. M., due into Denver at five o'clock, 36 hours.

Q. Are you familiar with those schedules from your own knowledge and observation of the operations independent of any necessary refreshment of your recollections by the timetables?

A. I am; I just referred to the timetable to be sure I was correct.

Q. Do the scheduled times eastward from the interchange points correspond generally to the times westward that you have just stated?

A. The running time is a little bit less eastward, because of the favorable grade conditions.

Q. Mr. Peckenpaugh, will you please refer to a statement of a sheet entitled, "Typical Examples of Through Road Freight Trains Running Between Terminals Shown for Continuous Ten-Day Period in September, 1939, (September 11 to 20th, inclusive)"?

A. Yes.

[fol. 1338] Mr. Mason: May we have this statement marked as Defendant's Exhibit No. 100?

The Court: It may be marked.

The Clerk: Defendant's Exhibit No. 100 for identification.

Mr. Mason: Did you prepare the statement just referred to, Mr. Peckenpaugh?

A. Yes, sir, it was prepared under my direction.

Q. From what sources was it prepared?

A. From the conductor's wheel-reports that operated these trains.

Q. Are the conductor's wheel reports used in the preparation of this exhibit available in the court room?

A. Yes, they are here.

Q. Was the information as to the ruling grade taken from the engineering profiles?

A. Yes, taken from the engineering profiles. Those are here.

Q. And they are available at this time for the examination of opposing counsel, are they?

A. Yes, sir.

Q. Now, I notice that the title of the exhibit states that it refers to through-road freight trains. Does this include any local trains operating between the points shown during [fol. 1339] the period referred to?

A. No, it does not, just through-trains.

Q. Who selected the period?

A. I did.

Q. What was the reason for that selection?

A. In my judgment, this gives the most representative, that is, September gave us a representative month. There is no particular reason for the choice of days as between any particular period in September, other than Labor Day. We took the middle of the month as being representative of the month, and the month as being representative of one-twelfth of a year's business.

Q. In your long experience with the Burlington, does the month of September generally represent a fair average month of the year?

A. It does.

Q. How did you determine that you had obtained all of the wheel reports for the through freight trains operated during the period shown and over these districts?

A. We took all of the wheel reports in the car accountant's records, and checked and took from that all of the wheel reports for the St. Paul-LaCrosse, the Savanna-LaCrosse, the Beardstown-Centralia, and the Centralia-Herrin territory.

[fol. 1340] Q. Did you segregate out any local trains?

A. Yes, we segregated from that the local trains that did the local switching and the local work. The balance represented all of the trains run.

Q. Has the exhibit been compared against the original sources to determine its correctness?

A. It has.

Q. Would you say whether, in your opinion, it is true and correct?

A. I believe it is entirely correct.

Q. Now, are these subdivisions shown on the exhibit subdivisions of particularly heavy traffic, as compared to the other main lines or other portions of the main lines of the system, or otherwise?

A. It is representative. The territory between Savanna and St. Paul gives us a picture of the high speed, double track line; the Beardstown Division area gives us a picture of a double-tracked, heavy tonnage, slow moving line. By slow moving, I mean general freight that does not require the high speed that is attained in operations on other main lines.

Mr. Mason: Have you any questions, Mr. Strouss?

[fol. 1341] Mr. Strouss: These wheel reports, Mr. Peckenhough, a wheel report has only the information concerning the particular train, isn't that true?

A. That is correct, yes.

Q. Now, the wheel reports which you have here are the wheel reports which cover the trains that are shown on the exhibit?

A. That is right.

Q. The other trains that were operated during this period, you don't have those similar reports here?

A. For trains not shown on this sheet, no.

Q. There were other trains operated between these points during that period?

A. Only local trains, only the local way freight trains.

Mr. Strouss: That is all the questions.

Mr. Mason: We offer the statement in evidence as defendant's Exhibit 100.

Mr. Strouss: The same objection.

The Court: The objection is overruled. It may be admitted.

(The document referred to was received in evidence and marked, "Defendant's Exhibit No. 100.")

[fol. 1342] Mr. Mason: Do these trains between St. Paul and Savanna include trains containing perishable and other expedited or manifest freight?

A. Yes, sir.

Q. And these trains between Beardstown and Centralia, Centralia and Herrin, what is the predominant character of the loaded traffic carried in them?

A. Almost exclusively coal.

Q. Is there any substantial amount of returning empties southward away from Beardstown?

A. Yes, as indicated on the sheet, the larger number of cars southbound are empty cars.

Q. Is the Burlington, in so far as its freight traffic is concerned, devoted to the transportation of any particular or restricted type of traffic, or does it carry all types?

A. It carries all types.

Q. It is not predominantly a wheat or grain carrying road, for example?

A. Not predominantly. The Burlington has always been recognized as a granger railroad, serving an agricultural area and handling, of course, all products of agriculture, livestock, coal in various states, perishable traffic from the west coast, manufactured products from the east; a very [fol. 1343] large variety of commodities.

Q. Does the Burlington serve principally as a bridge or intermediate carrier, or does it originate as well a substantial volume of traffic?

A. It originates a substantial volume of traffic, and also a bridge line for east-west commodities, as well as north-south.

Q. The Burlington is also a substantial carrier of passengers; is it not?

A. Yes, sir.

[fol. 1344] Q. Have you a statement referring to your passenger operation and bearing the title, "Maximum Number of Cars Handled in Various Main Line Passenger Trains, Total for the 10 Day Period of September 11th to 20th, 1939"?

A. I have.

Mr. Mason: May we have the statement just referred to marked "Defendant's Exhibit No. 101" for identification?

The Court: It may be marked.

The Clerk: Defendant's exhibit No. 101 for identification.

Mr. Mason:

Q. Was exhibit No. 101 for identification prepared by you or under your direction Mr. Peckenpaugh?

A. It was.

Q. From what sources was the exhibit prepared?

A. From the conductors' wheel reports.

Q. Have you the wheel reports covering these trains available in the courtroom?

A. Yes, sir.

Q. And available for the examination of opposing counsel?

A. Yes, sir.

Q. Does this exhibit include all or less than all of your principal through main line passenger trains operated [fol. 1345] during the period shown?

A. It represents not all of our through passenger trains. For example, between Chicago and St. Paul-Minneapolis we operate a daylight Zephyr type train, two roundtrips each way. That is not included in this because it handles no sleeping cars. It is merely a day-train. The through trains, transcontinental trains are included.

Q. This does not include any of your trains operating into or out of St. Louis or Kansas City

A. No, sir.

Q. Or any of your connections operating to Billings, Montana?

A. No, sir.

Q. Has the exhibit been compared with the wheel reports?

A. Yes, sir.

Q. Will you say whether or not it is true and correct.

A. It is correct.

Mr. Mason: Have you any questions, Mr. Strauss?

Mr. Strauss:

Q. The wheel reports which you have here are only the wheel reports covering the trains shown on the exhibit?

A. That is right.

[fol. 1346] Q. And during this period there were, were there not, Mr. Peckenpaugh, other trains operated?

A. Yes, as stated.

Q. For which the wheel reports are not here?

A. That is right.

Q. You don't have the train sheets covering the operations over this period here either, do you?

A. No, I do not.

The Court: Do you mean what you designated as "local train operations"?

A. Yes, sir.

Mr. Mason:

Q. Were the train sheets upon which the operation of these trains or any of them is shown used by you in any respect in the preparation of exhibit No. 101 for identification?

A. No, it was not.

Mr. Strouss: The train sheets would show all operations during that period?

A. That is right, yes, all trains are shown on the train sheets.

The Court: And those sheets are here?

A. No, the train sheets are not here; the wheel reports are here. The wheel reports that make up this exhibit are here.

The Court: In other words, the data for this exhibit was not taken from the train sheets?

[fol. 1347] A. No, sir.

Mr. Strouss: But you did check all of the wheel reports for that period to select these particular trains that are on the exhibit, did you not?

A. No, I wouldn't say that. From this ten-day period, September 11th to 20th, we know that No. 10, the Denver Zephyr, ran ten times. We pulled ten wheel reports for those dates, we couldn't miss any because there were only ten trains run. This would not be on the same basis as freight service.

Q. How would you know that you had all through trains during that period?

A. Because we know what trains covered this territory.

Q. Aren't there sometimes extra sections operated?

A. Sometimes, but not in this particular instance.

Q. Could you tell whether there had been or not if you had examined all wheel reports for that period?

A. Yes.

Q. You could?

A. Yes.

[fol. 1348] Q. How would you do that?

A. From our passenger reports we know there were no additional sections of these trains in that particular period.

Q. You would have to go to some record to determine that, would you not?

A. I wouldn't say that would be necessary. As I said, we know there were ten Zephyr trains No. 10 operated from Denver to Chicago.

Q. How do you know there were no extra sections operated?

A. Being in the territory and watching the operation, we would know there were not.

Q. Do you mean that you yourself watched all of these trains during that ten-day period?

A. No, I didn't say that. I say we know there were no additional sections of these trains run during the ten-day period and this is a correct statement of the trains as indicated.

Q. How do you know that?

A. From the wheel reports.

Q. By eliminating those trains which are not through trains?

A. That is right.

Q. From all of the wheel reports?

A. That is right.

[fol. 1349] Mr. Mason: We offer the statement in evidence as exhibit No. 101.

Mr. Strauss: Same objection.

The Court: Objection overruled, it may be admitted.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 101.")

Mr. Mason:

Q. Were all of these trains shown on exhibit No. 101 operated by steam locomotives?

A. No, train No. 10 eastbound and train No. 1 westbound and train No. 3-39 westbound, train No. 40 eastbound operated with Diesel electric units. The balance of the trains were operated with steam power.

Q. Does the Burlington have a number of electric locomotives used in passenger service as well as steam locomotives?

A. We have.

Q. You regularly operate the Denver Zephyrs and the Exposition Flyer with Diesel locomotives, do you?

A. That is right.

Q. Do these trains contain Pullman cars?

A. Yes, sir.

Q. Does the Burlington operate Pullman cars in service between points on its railroad and also in through [fol. 1350] service in conjunction with other railroads?

A. Yes, we do.

Q. What other railroads in particular do you have in mind?

A. We operate through sleeping cars between Chicago and the north Pacific Coast over the Northern Pacific; between Chicago and the north Pacific Coast with the Great Northern; between Chicago and the San Francisco area with the D. & R. G. and Western Pacific; outside of this exhibit between St. Louis and Los Angeles in connection with the Santa Fe.

Q. Where are those Pullmans received from or turned over to the Santa Fe that are operated in connection with that railroad?

A. Kansas City.

Q. Do you ever operate the North Coast Limited and the Empire Builder trains between St. Paul and Chicago as one rather than two separate trains?

A. Yes, we do, very largely through the fall and winter months.

Q. When that operation takes place, how many cars are handled as one unit between Chicago and St. Paul?

A. A maximum of 22 cars northbound and 23 cars [fol. 1351] southbound.

Q. Is that an overnight operation between Chicago and the Twin Cities?

A. Yes, sir.

Q. Will you explain just how that consolidation is handled at Chicago and St. Paul?

A. Trains Nos. 49 and 51, the Empire Builder and the North Coast are due to leave Chicago at 10:55 P.M. and 11 P.M.; they also have a five-minute variation in arrival time at St. Paul. The trains are set in the Chicago Union Station on individual or separate tracks and at 10:55 P.M., at the leaving time, the North Coast Limited is pulled out and doubled over onto the Empire Builder and leaves Chicago station as one train. On arrival at Division Street, St. Paul, the North Coast section being ahead, is cut off and backed into the St. Paul station. Then the Empire section is pulled up around the Y and backed in so

that they have a five-minute difference in arrival time at St. Paul. On the reverse movement the reverse is true. The trains leave St. Paul on a five-minute spread in the evening around 11 o'clock, the same procedure is handled. On arrival at Halsted Street, Chicago, the head-end, first train goes into the station, then the rear section is pulled [fol. 1352] in on another track and they are consolidated during the fall and winter months.

Q. Why is it during the fall and winter months?

A. During the summer season the trains handle a considerable number of extra cars and it is not feasible to consolidate them.

Q. Is the Empire Builder a through train to the north Pacific Coast?

A. Yes, sir, over the Great Northern.

Q. The North Coast Limited is over what railroad?

A. Over the Northern Pacific.

Q. Do they handle a substantial volume of tourists or national park business during the summer months?

A. They do, Glacier Park and Yellowstone.

Q. Mr. Peckenpaugh, do you have any rule on the Burlington as to the number of cars which may be operated in a freight train on your main lines?

A. You mean train limit?

Q. Yes.

A. No, we do not.

Q. What circumstance or consideration governs the number of cars to be placed in a freight train?

A. There are several factors. One would be the schedule [fol. 1353] requirements dependent on the leaving of a terminal and the time our train was due to reach final terminal. Another would be the tractive power of the engine and the grade over which it operates.

Q. I take it that the tractive power of the engine and the grade over which it operates refers to the weight of the train rather than the number of cars?

A. That is true, although the number of cars might be a factor. A third consideration would be the capacity of passing tracks on single track lines.

Q. Have you had any recent experience with the limitation of trains of particular lengths because of the lack of passing tracks to permit longer train operation?

A. That has been a factor in recent years because of the acquisition of heavier power, higher tractive effort,

the possibility of handling an increased number of cars has occasioned studies of capital investment to increase capacity of passing tracks in order to accommodate this particular movement.

Q. Did you as superintendent of one of your divisions have that experience?

[fol. 1354] — A. Yes, particularly in Missouri on the Missouri lines, a territory of rolling grade, rolling territory where it seemed almost impossible to find a level location for a passing track. Because of the steep grades trains were limited to cars and tonnage. With the advent of heavier power, more efficient modern power, the train load has been increased to the extent that it became necessary to increase and we are still increasing the capacity of passing tracks. That becomes a rather important factor in a train limit.

Q. What was the limit in number of cars enforced by the passing tracks in this particular district to which you refer prior to the increase in their limit?

A. About 60 cars.

Q. What increase did you make as a result of increasing passing tracks?

A. 125 cars.

The Court: We will take our noon recess at this time.

[Thereupon at 12 o'clock noon of December 11, 1940, the court stood at recess until 2 o'clock P.M. this day.]

[fol. 1355] December 11, 1940, Two o'clock, P.M.

All parties being represented, as heretofore noted, proceedings were resumed as follows:

The Court: You may proceed.

Mr. Mason: We have no further questions of Mr. Peckenpaugh at this time. Do you wish to cross-examine now, Mr. Strouss?

Mr. Strouss: No, I would rather defer the cross-examination.

The Court: You say step aside, Mr. Peckenpaugh. You will be recalled for cross-examination by counsel later.

Mr. Mason: Do you wish the record to show that Mr. Peckenpaugh is supplying you with the current timetables, working timetables?

Mr. Strouss: That is right.

Mr. Mason: Do you want to cross-examine Mr. Warfel at this time?

Mr. Strauss: Yes.

GEORGE H. WARFEL was recalled to the stand, and testified further as follows:

Cross-examination.

By Mr. Strauss:

Q. Mr. Warfel, can you determine the ruling grade in a [fol. 1356] particular district merely by riding over that district in a train?

A. No, we usually get the ruling grade from the calculations of the engineers and profiles.

Q. That is really the only way you can get that?

A. That, I perhaps should qualify. We get the different degrees or percentages of grade from the profiles. The ruling grade is not necessarily the steepest individual grade in a territory. I would say, as an offhand definition of ruling grade, the hill that is the hardest to get over in the district.

Q. Well, that information you don't get by just riding over the district, you have to go to a record to get that, don't you?

A. No, you do get that by riding over the district and by experience with your heavier trains.

Q. In other words, you would determine, by riding over a district yourself, in each of these districts that the ruling grade is a certain percentage?

A. No, you determine where your most difficult grades are by experience and ascertain what the percentages of [fol. 1357] those grades are or steepness of the grade from the engineer's figures.

Q. So, when you give a percentage of ruling grade, that is based on the engineer's figures?

A. That is correct.

Q. I believe you testified that for the past year since March 15, 1939, you have been superintendent of the Kansas Division?

A. That is right.

Q. And before that, for two years, assistant superintendent at North Platte?

A. Yes.

Q. What are the duties of a superintendent or an assistant superintendent?

A. The superintendent has general jurisdiction over all departments of the railroad; I mean by that, over the transportation, the maintenance of way, and the mechanical departments on his division, on the Union Pacific Railroad.

Q. When you say, "all of the railroad," you don't mean the whole system, you mean of his division?

A. I mean, of his division.

Q. And the assistant superintendent, his duties, what are they?

A. His duties are similar to those of the superintendent under his direction.

[fol. 1358] Q. Do either the superintendent or assistant superintendent have duties with respect to other divisions?

A. No, not directly.

Q. In the past year, how many times have you traveled over the entire system of the Union Pacific?

A. I haven't traveled over the entire system of the Union Pacific in the past year.

Q. What parts have you traveled over?

A. From Kansas City to Los Angeles, via Denver, Cheyenne, Ogden and Salt Lake.

Q. When?

A. In August of 1939.

Q. Any other time?

A. I traveled over the Nebraska Division from Cheyenne to Omaha on the return of that trip in August of 1939.

Q. Any other time?

A. No.

Q. How long were you on that trip?

A. Eight or nine days.

Q. Were you just going through to Los Angeles?

A. Yes.

Q. You just made the trip through to Los Angeles, and back to Kansas City?

[fol. 1359] A. That is correct.

Q. When you were assistant superintendent at North Platte, how many times were you over the entire system?

A. I made a trip to San Francisco and return, a trip to Los Angeles and return, several trips—oh, I should say,

probably twenty or twenty-five trips—to Omaha and return, and very frequently as far as Grand Island, between Grand Island and Cheyenne, I traveled daily. These trips that you asked me about are all since I became assistant superintendent at North Platte?

Q. Yes.

A. That was subsequent to my work as a general officer of the railroad.

Q. That was, as I understand, between some time in 1937, and March 15, 1939?

A. Yes, that is right.

Q. How many times in the past year have you traveled between Council Bluffs and North Platte?

A. Only the one time referred to.

Q. Now, you testified concerning improvements in locomotives, I believe, your super-heaters, feed water heaters, the forced feed lubrication, there has been some improvement, also, in the baffle plate, baffle draft, some improvement [fol. 1360] along that line?

A. There has been, particularly in the front end of the smoke box, as we call it, of the locomotives, improvements in the nozzles and jets of the exhaust steam, creating better draft through the boiler tubes of the engine.

Q. Was there some improvement in the firebox arch?

A. I think there has been. I know of some replacements and rearrangements in the last few years; that is, I know they have made them, but I am not qualifying myself as an expert on firebox drafting.

Q. When you testified as to improvements, that your engines had these improvements, the super-heaters, feed water heaters, and forced feed lubrication, do you mean by that that all of the locomotives owned by the Union Pacific have those improvements, the road engines and yard engines as well?

A. I think I said that the more modern engines had those improvements, the later purchase of engines.

Q. Those are more or less recent improvements, I mean recent developments in locomotives, are they not?

[fol. 1361] A. Yes, we have had super-heaters on locomotives for a number of years.

Q. About 1921?

A. I was going to say some twenty years, I would say, on the super-heaters. The other improvements you men-

tion have come since that, but the super-heater is the earlier one of the recent improvements.

Q. Of course; they were not all placed on your locomotives at one time?

A. Oh, no, usually they were developed, bought on new power, that is, came with new power as it was bought, and also bought separately and applied to the best of the older power which justified such expenditures.

Q. Now, I think you testified that your passenger engines run around 600 miles in some instances?

A. The longest runs.

Q. And freight around 335?

A. That is right.

Q. How long have you been making those long runs?

A. Runs as long as 600 miles in the last three or four years. Runs as long as 335 miles for the past six or seven years.

[fol. 1362] Q. Has the increase in capacity of the tender had some tendency to bring about that increase in distance of running an engine?

A. That has helped. I think the higher degree of maintenance of the locomotives and the force feed lubrication; improvements in lubrication and in closer fits of working parts have been a greater factor than the increased size of locomotive tenders.

Q. You testified that your on-time performance of perishable schedules was better than 95 per cent?

A. I expressed that opinion, yes; I said I didn't have the accurate percentage.

Q. By that did you mean over the entire schedule, that is, including the part run by the connecting carrier as well as the part run by your railroad?

A. No, what I had in mind when I said that was the portion run over the Union Pacific that we delivered, I am sure better than 95 per cent of our trains are operated within the portion of the schedule, the number of hours allotted to us, which is about 63 hours. That is our part of that through schedule and I am sure that better than 95 per cent go over our road in 63 hours or less.

[fol. 1363] Q. You didn't by that mean to testify that the deliveries to you by connecting carriers were 95 per cent on time or reasonably on time?

A. No, but I would say that our deliveries to the connecting carriers which includes whatever time may have

been lost by the connections which came to us before we got the train, that our delivery to the connecting carriers on the eastbound schedules are 95 per cent or better on time. In other words, though we may get the train late from Colton on our own road or from Roseville when it comes to us at Salt Lake, we will deliver on time at Council Bluffs and Kansas City.

Q. In other words, you make up time, back time?

A. That is right, yes, sir.

Q. You stated that your freight business had been very much affected by highway competition?

A. That was speaking of the branch line traffic.

Q. Is that because they are carrying the traffic faster?

A. Because as a rule your branches spread out from local distributing centers for comparatively short distances and practically every good branch on any railroad in the country has been paralleled by good highways within the last twenty-five or thirty years, with the result that [fol. 1364] much of the freight which used to be distributed by train is now distributed by the wholesalers and by the jobbers, either in their own trucks or by contract carrier in some cases and in some cases by common carrier trucks, but much of that short-distance distribution other than spreads of 200 to 300 miles from distributing centers has been taken from the railroad by the highway transportation and that has very badly reduced the revenues on branch lines.

Q. There has been some of your main line travel taken by highway competition too, hasn't there?

A. Yes, there has.

Q. Has that been due to speed of movement by the trucks?

A. No, not the speed of movement by the trucks. As a matter of fact I might say in that connection that practically all of the Class I railroads in a consuming territory have put on fast overnight hot-shots in an effort to regain business which had been taken away by the highways because of the flexibility with which they can move trucks at different times and different hours to different places. They get a considerable portion of that business away from the railroads which they will get back by these [fol. 1365] hot-shots.

Q. Which operate at passenger train or faster speed?

A. Approximately that.

Q. On your exhibit No. 91 I believe you testified that only through trains are shown by that exhibit?

A. That is correct.

Q. What do you mean by "through trains" there?

A. Trains which handle traffic through from one terminal to the other. I don't mean the final terminal of the railroad, but Cheyenne or Denver to Omaha or Kansas City or Cheyenne to Salt Lake or Ogden, eliminating short local runs, branch runs, and it would also eliminate trains such as you just now spoke of, the fast merchandise train run out of Kansas City, for example, which terminates at Ellis and only makes a 300-mile run. That train would not be on this list here.

Q. Any other trains that would not be on this list?

A. That is the only one I can think of, aside from the branch and part district locals. I might add, by the way, that train is frequently a good big train because in that territory we don't run through freight service and that [fol. 1366] carries all the service for that territory.

Q. You mean the so-called "hot-shots"?

A. That is right, when it gets over 85 cars I begin to get uneasy about the hot-shot schedule.

Q. I should think you would.

A. It makes it, however, I will say that.

Q. What territory is that?

A. From Kansas City to Ellis, 303 miles.

Q. Your exhibit No. 91 covers a ten-day period August 10-19?

A. Yes, sir.

Q. On exhibit No. 92, which is the passenger train exhibit you took a period of four months, that is, four different months, November, 1939, and January, April, and July, 1940?

A. That is right.

Q. Why did you take a ten-day period in one instance and a four-month period in the other?

A. We were asked for a ten-day picture on the freight traffic and for a typical exhibit showing the operation of through passenger traffic on the Union Pacific railroad, and as I believe I said yesterday I had seen an exhibit made on quarterly months since we got the 800's showing

the big improvements that have been made in our passenger handling and I thought that would make the type of [fol. 1367] exhibit they wanted here so I made it that way.

Q. It would more probably indicate normal traffic?

A. It indicates all the traffic. In fact, it is a sampling throughout the year and gives the whole picture of passenger traffic on the Union Pacific.

The Court:

Q. A more comprehensive picture?

A. Yes.

Mr. Strouss:

Q. That would be true more with respect to freight traffic?

A. Had we not been asked for a ten-day period on the traffic line operation I think I would have considered doing the same thing with the freight exhibit.

Q. What are the consist of passenger trains which are operated here, which of these?

A. They are shown averaged here.

Q. I mean as to head-end cars?

A. Pardon me, I thought you referred to the freight traffic.

Q. Let me ask you, first, Mr. Warfel, the train set out in the Omaha-Ogden square and the ones over on the right-hand side, the second frame Ogden to Los Angeles, those are the same trains in each division or each section [fol. 1368] except that they run on through to Los Angeles?

A. Some of those trains run to San Francisco also. For instance, in line 3 of that particular right-hand square train No. 27, and the next line, train No. 49, those trains go through on the Southern Pacific to San Francisco.

Q. The trains shown in both squares are the same train except that the terminal points are different?

A. That is right, for instance, on line 8, train No. 717, the Challenger (L. A.), that is the Los Angeles Challenger; that is the same as this train over in the Ogden-Los Angeles on line 42, train No. 717.

Q. What about the head-end cars on the trains shown on this exhibit?

A. Most of these trains shown here do comparatively little head-end work with the exception of train No. 21-5,

line 2 in the upper left-hand square, Pacific Limited. That train carries four to five head-end cars daily, I should say and likewise I should point out that in the upper right-hand bracket that train No. 111, City of Denver, is a streamlined train but has one mail and one baggage car and we do a very heavy mail business, we run that mail car to capacity and do a big mail and express business on [fol. 1369] that streamlined train. The other streamliners do very little mail and express work, practically all passenger work. These Challenger trains which are among the longest shown on this exhibit carry only two or three head-end cars as a rule, the balance are passenger-carrying cars.

Q. Are they Pullmans?

A. They carry about an even number of day cars, coaches and chair cars and so-called "tourist" sleeping cars on the Challengers. They carry no standard sleepers but the tourist sleepers carried on these trains today are the standard sleepers of yesterday which have been converted into tourist sleepers by the simple means of taking up the carpets in the sections and one or two other small luxuries and designating them as "tourist" cars.

Q. There are other trains which are run between the different points shown on this exhibit other than those shown on the exhibit?

A. Not through between these points.

Q. Locals?

A. Yes, there are some local trains, as from Omaha to Grand Island; we have a motor train with one baggage-express car. We have a train that comes in at Columbus off the branch and runs the 90 miles to Omaha; runs of [fol. 1370] that sort are not shown.

Q. That is what you mean by "locals"?

A. Yes.

Q. All other trains are shown?

A. That is right.

Q. I think I asked you to check these trains that I found where there were broken knuckles in the Nebraska division between Council Bluffs and Grand Island, August 13, extra 5047 east at Mile Post 95 east of Gardiner, broken knuckle, 106 cars; August 14, extra 5071 east at Duncan, broken knuckle, 119 cars; August 15, extra 5044 east, coupling pin pulled near the rear end on a 66-car train. Is that correct?

A. Will you give me that last train again?

Q. Extra 5044 east, August 13.

A. Yes, that is correct. I should state that I happen to know very well the territory in which two of these occurred. You spoke of one $1\frac{1}{2}$ miles east of Gardiner and the one at Duncan. We have approximately 41 miles of tangent track eastward from Grand Island toward Columbus until the curve at Gardiner is reached and from Gardiner on into Columbus there is a succession of curves. You approach the Loup River there and it is also grown up with trees on both sides of the track where you have [fol. 1371] been running in open country. Usually on the curves at Gardiner and Duncan if there is any defect whatever observable in a train it is observed there when they come off the straight track onto these curves, but the engine is already out of sight of the conductor before the conductor gets to the curve because they go in behind the trees. I happen to know that in both the case of extra 5047 east on August 13th and extra 5071 east on August 14, defect was detected by the crew at the rear of the train, the first one a hot box, the second one sparks indicating hot wheels or brakes sticking and in each case the air was applied by the conductor from the rear end and the knuckle broke just as the train came to final stop. In the other case that you mentioned, extra 5044 east at Columbus, that train had stopped at the Columbus coal chute standing over three or four crossings for a period of about five minutes and some impatient individual had climbed through the train, stepping on the cut lever as he did so and when the train started it separated.

Mr. Strouss: That is all.

[fol. 1372] Redirect examination.

By Mr. Mason:

Q. Does the record which you have consulted in this connection show any personal injuries to any members of the train or engine crew in connection with those incidents?

A. There were no personal injuries in connection with those incidents.

Q. You spoke of the 63-hour schedule but didn't mention the points, the origin and terminal points?

A. The 63 hours applies from Ogden, Utah, to Council Bluffs, 63 hours and 13 minutes to be exact.

Q. That is the Union Pacific over-all time?

A. That is the Union Pacific portion of 139 hours and 30 minutes from Colton or Roseville to Chicago.

Q. That 63 hours may be affected by your proportion of the run-off time if run-off time is included or is to be made up?

A. That is true. On run-off trains we have to make that same distance in 56 hours and 17 minutes.

Mr. Mason: That is all.

The Court: May this witness with his records be excused?

[fol. 1373] Mr. Strouss: Yes.

The Court: It is so ordered.

(Witness excused.)

[fol. 1374] E. A. WHITE was called as a witness on behalf of the defendant, and being first duly sworn testified as follows:

Direct examination.

By Mr. Booth:

Q. Will you state your name and residence to the reporter?

A. E. A. White, Chicago, Illinois, car accountant for the Chicago, Burlington and Quincy Railroad Company.

Q. Are you in the accounting department of that company?

A. Yes, sir.

Q. What length of time have you been in the accounting department of the Burlington?

A. Twenty-five years.

Q. Are you familiar with the accounts rendered annually and monthly by the company, called the annual reports, on forms OS-A and OS-E reports to the Interstate Commerce Commission?

Mr. Booth: There has been handed to the clerk a statement headed, "Chicago, Burlington & Quincy Railroad Company, Freight Operating and Freight Transportation Expenses, Related to Traffic, Calendar Years, 1922 to

[fol. 1375] 1939," which we will ask to be marked for identification.

The Court: It may be marked.

The Clerk: Defendant's Exhibit No. 102 for identification.

Mr. Booth: Have you before you a copy of the exhibit just described?

A. I have.

Q. From what source were the figures in columns B, C, and D, opposite the years 1922 to 1939, inclusive, in column 9 derived?

A. From the annual reports to the Interstate Commerce Commission.

Q. Of the Chicago, Burlington and Quincy Railroad Company?

A. Of the Chicago, Burlington and Quincy Railroad Company.

Q. Have you those reports with you?

A. I have.

Q. On the table by your side?

A. Yes, sir.

Q. And are the figures I have just referred to correctly transcribed from those reports?

A. They are.

Q. The figures in columns E and F, and in the three horizontal boxes at the bottom of the exhibit are calculations, are they not?

[fol. 1376] A. Yes, sir.

Q. From the figures in B, C, and D?

A. Yes, sir.

Q. And have those calculations been correctly made?

A. They have.

Q. This table does not represent any adjustments made by you or anyone else, so far as you know?

A. No, sir, they are exact transcriptions from the reports with those calculations.

Mr. Booth: Any questions, Mr. Strouss?

Mr. Strouss: No questions.

Mr. Booth: We offer this exhibit in evidence as defendant exhibit No. 102.

Mr. Strouss: The same objection.

Mr. Booth: We tender for inspection and for the use of counsel the reports referred to by the witness.

The Court: The objection is overruled. The document may be admitted in evidence.

(The document referred to was received in evidence and marked, "Defendant's Exhibit No. 102.")

Mr. Booth: There has been handed to the clerk and we ask that there be marked, "Defendant's Exhibit 103 for Identification," one sheet headed, "Chicago, Burlington [fol. 1377] and Quincy Railroad Company, Freight Service Operating Averages, Calendar Years 1922, 1924, 1926, 1928, 1930, 1932, 1934, 1936, 1938, and 1939."

The Court: It may be marked.

The Clerk: Defendant's Exhibit No. 103 for identification.

Mr. Booth: Mr. White, are the sources used in preparing this exhibit shown in the five sources notes at the bottom of the exhibit?

A. Yes, those are the sources.

Q. And in addition to the annual reports of the Chicago, Burlington & Quincy Railroad Company for the years shown in columns C to L, inclusive, of the exhibit, you used what other reports to the Interstate Commerce Commission?

A. Forms OS-A and OS-E.

Q. For those years?

A. For those years as shown.

Q. Have you those forms with you?

A. Yes, sir, I have.

Q. They are on the table beside you?

A. Yes, sir.

Q. In so far as the items shown in this exhibit involve items taken bodily from the reports of the company to the Commission. Have those items been correctly transcribed [fol. 1378] by you?

A. They have.

Q. And in so far as the items shown in the exhibit involve calculations by use of the formula described in the footnotes, have those calculations been correctly made?

A. Yes, they have.

Q. And in accordance with those formula?

A. Yes, sir.

Q. Is this exhibit true and correct, to the best of your belief?

A. It is.

Q. You have checked this exhibit yourself?

A. I have.

Mr. Booth: Any questions, Mr. Strouss?

Mr. Strouss: No questions.

Mr. Booth: We offer it in evidence as Defendant's Exhibit No. 103.

Mr. Strouss: The same objection.

The Court: The objection is overruled.

Mr. Booth: And we tender therewith, in addition to the annual reports, the forms OS-E.

The Court: It may be introduced in evidence.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 103.")

Mr. Booth: There has been handed to the Clerk and we [fol. 1379] ask to have marked as defendant's exhibit 104 for identification, a typewritten statement in one sheet, headed "Chicago, Burlington & Quincy Railroad Company, Number of Cars of Revenue Freight Carried during the Year 1939." Have you that before you, Mr. White?

A. I have.

Q. Aside from the totals in the horizontal line headed "Total, 110 to 143, Inclusive," I ask you if these descriptions of commodities, class numbers and figures are taken without change or alteration from schedule 541 of the Chicago, Burlington & Quincy Railroad Company's annual report to the Interstate Commerce Commission on Form A for the year 1939?

A. They are.

Q. And are the totals shown in the line to which I refer correctly computed, to the best of your knowledge and belief?

A. They are.

Q. This exhibit involved no calculation other than the totals?

A. That is all.

Mr. Booth: Any questions, Mr. Strouss?

Mr. Strouss: No questions.

Mr. Booth: We offer this in evidence as defendant's ex- [fol. 1380] hibit 104.

Mr. Strouss: Same objection.

The Court: Same ruling. It may be admitted in evidence.

(The document referred to was received in evidence, and marked, "Defendant's Exhibit No. 104.")

Mr. Booth: No further questions.

Cross-examination.

By Mr. Strauss:

Q. Mr. White, your exhibit 102, in column C, the amounts there shown represent the totals of accounts 201 to 462 of the annual report?

A. That is correct.

Q. And the amounts shown in column D represent the total of accounts 371.—

A. 372—no, 371.

Q. —371 to 420?

A. That is correct.

Q. Now, in exhibit 103, I notice that there has been a reduction in miles of line operated. Is that due to abandonment of unprofitable branches?

A. Well, principally. There have been some changes in the operation of freight service over certain lines, but principally due to the abandonment of lines.

Mr. Strauss: I think that is all the questions I have at this time. I want to look at the annual reports, and if I do not have any other questions on which to call Mr. White back I will let you know, Mr. Booth.

Mr. Booth: Very well.

A. E. L. GAREISS was called as a witness on behalf of the defendant and, being first duly sworn, testified as follows:

Direct examination.

By Mr. Booth:

Q. State your name and residence to the reporter.

A. My name is A. E. L. Gareiss. I reside in Chicago. I am statistician of the Illinois Central System, which in-

cludes the Illinois Central Railroad Company and the Yazoo and Mississippi Valley Railroad Company.

Q. I show you Exhibit No. 27 in this case, defendant's exhibit No. 27, which was introduced through the examination of Mr. C. R. Young, and ask you to state what portion of that exhibit covers the line of the Yazoo and Mississippi Valley Railroad Company?

A. Well, the lines of the Yazoo and Mississippi Valley Railroad Company are shown along the Mississippi River here, from Memphis down to New Orleans with various branches. This map does not show all the stations that I would like to describe here, but it runs through Vicksburg, Greenville and Baton Rouge. It also includes the leased lines of the Alabama and Vicksburg Railway Company, and the Vicksburg, Shreveport and Pacific, extending from Lorraine, Louisiana, to Meridian, Mississippi. It also includes the line from Memphis to Gwin.

The Court: Many of the points, the cities that you have named, are not shown on this exhibit?

A. They are not shown on the exhibit.

Mr. Booth: Generally speaking, it includes the lines south of what points?

A. South of Memphis along the Mississippi River.

Q. It doesn't include the line east of that through Frogmore and McComb?

A. No, that is the Illinois Central.

Q. Now, to what extent and for what length of time has [fol. 1383] the Illinois Central report to the Interstate Commerce Commission, the annual report, comprised the operations of the Yazoo and Mississippi Railroad Company?

A. The annual reports themselves are made separately for the Illinois Central and the Yazoo and Mississippi Valley Railroad.

Q. Has that been true since 1922, including 1922?

A. Yes, sir.

Q. Do you have here in the courtroom the annual reports for each of the two railroads, the Illinois Central and the Yazoo and Mississippi Valley, for the years 1922 to 1939 inclusive?

A. I have them in court, yes.

Q. What as to Forms OS-A and OS-E, were those reported separately or consolidated?

A. They were consolidated.

Q. So, while there will be two annual reports for each of those years, there would be but one OS-A or OS-E?

A. That is correct.

Q. There was introduced for identification during the testimony of Mr. C. R. Young, and marked "Defendant's Exhibit No. 28," an exhibit entitled, "Illinois Central System, Including the Yazoo and Mississippi Valley Railroad [fol. 1384] Company, Freight Operating and Freight Transportation expenses Related to Traffic, Calendar Years 1922 to 1939, Inclusive." Are you familiar with that exhibit?

A. I am.

Q. Did you prepare it?

A. I did.

Q. Did you prepare it entirely from the annual reports of those two companies to the Interstate Commerce Commission for the 17 years covered by that exhibit?

A. All these figures were taken from the annual reports to the Interstate Commerce Commission.

Q. That is, except the computations?

A. That is, except the computations.

Q. Then the figures, in columns B, C & D, represent the addition to the corresponding items in those two reports for the years mentioned; is that correct?

A. That is correct.

Q. Are the figures there shown in columns B, C, and D, correct additions of the corresponding items in those reports for the years mentioned?

[fol. 1385] A. They are correct.

Q. And that work you prepared yourself?

A. I prepared it myself.

Q. Did you also prepare the computations shown in columns E and F, and in the three horizontal blocks at the foot of the exhibit?

A. I did.

Q. And, including those computations, is the exhibit true and correct to the best of your knowledge and belief?

A. It is true and correct, to the best of my knowledge and belief.

Mr. Booth: Any questions, Mr. Strauss?

Mr. Strauss: I have no questions.

Mr. Booth: We offer the exhibit in evidence as defendant's exhibit 28.

Mr. Strauss: The same objection.

The Court: The objection is overruled. It may be admitted.

(The document referred to was received in evidence, and marked "Defendant's Exhibit No. 28.")

Mr. Booth: We tender to counsel for examination the reports referred to by the witness, which are here in the courtroom.

Q. Mr. Gareiss, there was introduced in evidence during the examination of the witness C. R. Young, one sheet [fol. 1386] marked "Defendant's Exhibit No. 29 for Identification," and which is headed "Illinois Central System, Including the Yazoo and Mississippi Railroad Company, Freight Service Operating Averages, Calendar years 1922, 1924, 1926, 1928, 1930, 1932, 1934, 1936, 1938, and 1939." Have you that before you?

A. I have.

Q. Did you prepare this yourself?

A. I prepared this myself.

Q. Did you prepare it from the sources by the formula and methods and computation shown in the five source notes at the bottom of the exhibit?

A. I did.

Q. Have you with you the forms OS-A of the two railroads mentioned consolidated as you have described, in so far as they were used in the preparation of this exhibit?

A. I have.

Q. Were any OS-E used?

A. The OS-E were used for 1936, 1938 and 1939.

Q. Have you those with you?

A. I have.

Q. Are the items shown therein as having been transcribed from the sources mentioned, and the computations made therein as appearing on the face of the exhibit, true [fol. 1387] and correct, to the best of your knowledge and belief?

A. They are.

Mr. Booth: We offer the exhibit in evidence, as defendant's exhibit No. 29, and also tender counsel for his use the forms OS-A and OS-E therein referred to.

Mr. Strouss: The same objection.

The Court: The objection is overruled. The document may be admitted in evidence as exhibit 29.

(The document referred to was received in evidence, and marked "Defendant's Exhibit No. 29.")

Mr. Booth: There has been handed the Clerk, and we ask that there be marked "Defendant's Exhibit No. 105 for Identification," a typewritten sheet headed "Illinois Central Railroad Company, Number of Carloads of Revenue Freight Carried of Certain Selected Commodities, Total Products of Agriculture and Total Carload Traffic as shown on Schedule 541 of the Annual Report to the Interstate Commerce Commission, Calendar Year 1939." Mr. Gareiss, have you that sheet before you?

A. I have.

Q. Did you prepare this yourself?

A. I did.

[fol. 1388] Q. Since you came down to Tucson?

A. That is right.

Q. Aside from the totals shown in the third line from the bottom of the exhibit, is this sheet an accurate and correct transcription of the portion of Schedule 541 of the Illinois Central's Annual Report to the Interstate Commerce Commission for the calendar year 1939, as it purports to be on the exhibit?

A. It is.

Q. And the totals were made by yourself?

A. The total of items 110 to 143 was made by myself.

Q. Are they true and correct?

A. They are true and correct?

Mr. Booth: Any questions, Mr. Strouss?

Mr. Strouss: No questions.

Mr. Booth: We offer this exhibit in evidence as defendant's exhibit 105.

Mr. Strouss: The same objection.

The Court: The objection is overruled. It may be admitted.

(The document referred to was received in evidence and marked "Defendant's Exhibit No. 105 in Evidence.")

Mr. Booth: There has been handed to the Clerk and we [fol. 1389] ask that there be marked as defendant's exhibit 106 for identification an exhibit headed "The Yazoo and Mississippi Valley Railroad Company," consisting of one sheet, and also headed "Statement Showing Number of Carloads of Revenue Freight Carried of Certain Selected Commodities, Total Products of Agriculture, Total Carload Traffic as Shown on Schedule 541 of the Annual Report to the Interstate Commerce Commission, Calendar Year 1939."

Q. Mr. Gareiss, did you prepare this exhibit?

A. I did.

Q. Since you came to Tucson?

A. Since I came to Tucson.

Q. Is this exhibit, exclusive of the third line, of totals a correct transcription of the corresponding entries in the report referred to in the title?

A. It is.

Mr. Booth: Any questions?

Mr. Strouss: No questions.

Mr. Booth: We offer this in evidence as defendant's exhibit 106.

Mr. Strouss: The same objection.

The Court: Objection overruled. It may be admitted.

[fol. 1390] (The document referred to was received in evidence and marked "Defendant's Exhibit No. 106.")

Mr. Booth: We ask the privilege of substituting for these two exhibits and the similar exhibit introduced in Mr. White's examination, planograph copies.

The Court: There may be such substitution. We will take our afternoon recess at this time.

(Thereupon a short recess was taken, after which proceedings were resumed as follows:)

The Court: Mr. Strouss, you didn't want to cross-examine the last witness until later?

Mr. Strouss: No, I think not. I could ask a general question. I want to go over the annual reports before he is released.

The Court: Then you may resume the witness stand.
[fol. 1391] Following the recess, proceedings were resumed as follows:

Cross-examination.

By Mr. Strouss:

Q. Exhibit No. 28, the amounts shown in column C represent the total of accounts 210 to 462 of the annual report?

A. They include all the operating expenses, I think it is account 201.

Q. 201 to 462?

A. That is correct.

Q. And the amounts in column D represent the accounts 371 to 420?

A. Correct.

Q. Of course here you have combined from the two annual reports?

A. That is the combination of the two annual reports.

Mr. Strouss: That is all at this time until I have examined the reports.

The Court: You may step aside subject to later cross-examination. Call the next witness.

[fol. 1392] PETER PARKE was called as a witness in behalf of the defendant and being first duly sworn testified as follows:

Direct examination.

By Mr. Booth:

Q. Will you state your name and residence to the reporter?

A. Peter Parke.

Q. Where do you reside?

A. 1725 East 53rd Street, Chicago.

Q. What official position do you have with the Pullman Company?

A. I am chief engineer for the Pullman Company.

Q. How long have you occupied the position of chief engineer of that company?

